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ABSTRACT

A study examining recent trends in tuition and required fees at public colleges and universities in relation to state support and related economic indicators is summarized. The study addressed (1) the issues that historically have surrounded the price of public higher education; (2) the changes in tuition and required fees, state appropriations, the higher education price index, consumer price index, and per capita disposable income during the past two decades; and (3) how the changes in tuition and fees have compared to changes in relevant economic indicators. It is concluded that tuition and required fees have increased substantially in the last 15 years, but the income parents and students use to pay tuition has increased commensurately and state appropriations have also increased substantially. It is proposed that the economic recession of the early 1980s substantially changed the relationship between state support of public higher education and the tuition at public institutions, and that further movement in that direction is likely to result in even more obvious intervention by public policymakers. Five appendices and 40 tables/figures supplement the report. Contains 53 references. (MSE)

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FOCUS ON PRICE

Trends in Public Higher Education: Tuition and State Support

John R. Wittstruck
Stephen M. Bragg

State Higher Education Executive Officers
1860 Lincoln Street, Suite 310
Denver, Colorado 80295

July 1988

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FOREWORD

This monograph was commissioned by the SHEEO Committee on College Costs, chaired by Gordon K. Davies, Director of the State Council of Higher Education for Virginia.

The committee, created by 1987-88 SHEEO President Kerry Romesburg, responded to the heightened public concern about the rising cost (or, more precisely, price) of a college education. The committee set as its task to confront three important public policy questions facing the states: What factors affect the price paid by students for a college education? What factors affect the total cost of higher education, especially that portion borne by state taxpayers? And finally, how can states help insure that parents and students are able to pay the cost of going to college?

In addition to this monograph by John Wittstruck and Steve Bragg, the committee sponsored three other related activities: a 50-state survey of state finance and executive officers on tuition, student aid and cost issues; a paper by Denis Curry on tuition and student aid policy ("Tuition and Student Policies: What Role for SHEEOs?"); and a paper by Paul Brinkman, "The Cost of Providing Higher Education: A Conceptual Overview." All three are available from the SHEEO Office. The summary committee report will be available in August 1988.

I welcome your comments and reactions to these papers and reports.

James R. Mingle
Executive Director
State Higher Education Executive Officers

ACKNOWLEDGEMENTS

This study used tuition and required fee data collected by the Washington Higher Education Coordinating Board through its annual survey of SHEEO agencies. State appropriation data were made available for the study by the Center for Higher Education at Illinois State University. These appropriation data are reported annually in the **Grapevine**. The authors would like to acknowledge the help they received from Jacquelin Johnson at the Washington Higher Education Coordinating Board and Gwen Pruyne, Illinois State University. Both were most responsive to our request for data and for providing them on updated, micro-computer diskettes.

We are especially appreciative of all the State Higher Education Finance Officers (SHEFOs) who, over the years, have completed the tuition and state appropriation survey requests. Without their efforts, this study would have been far more difficult and less complete.

John R. Wittstruck
Director
SHEEO/NCES Communication Network

Stephen M. Bragg
Associate Director, Academic Affairs
Illinois Board of Higher Education

EXECUTIVE SUMMARY

In the last quarter century, the U.S. higher education system has grown to become a large, complex, and diverse enterprise. In the fall of 1987, an estimated 12.5 million students were enrolled in American public and private colleges and universities with 9.7 million students (77%) enrolled in the public sector (Center for Education Statistics 1987).

Financing such a vast enterprise is equally complex. Higher education revenue exceeded $100 billion for the first time in fiscal year 1986. Nearly $67 billion (65%) was revenue at public, four- and two-year colleges and universities. In fiscal 1986, four-year public institutions received 43% of their income from state and local governments and 14% from tuition while two-year colleges received 64% from state and local governments and 16% from tuition (National Center for Education Statistics 1988). The federal government also plays a major role in financing through student financial aid programs.

In recent years, the cost of operating such a vast system, the price of that system to students, and the costs to state and federal government have come under scrutiny (To 1987, O'Keefe 1987, Snyder and Galambos 1988). One dimension of the current criticism has focused on recent increases in tuition and fees, questioning whether or not they have been excessive.

The purpose of this paper is to examine recent trends in tuition and required fees at public colleges and universities in relation to state support and selected economic indicators: the higher education price index (HEPI), the consumer price index (CPI) and per capita disposable income (PCDI).

The study addresses three questions: (1) Historically, what issues have surrounded the price of public higher education? (2) What have been the changes in tuition and required fees, state appropriations, the higher education price index, consumer price index, and per capita disposable income during the past two decades? and (3) How have the changes in tuition and fees compared to changes in relevant economic indicators?

(1) How much did resident undergraduate tuition and required fees increase in the last 15 years (1972-73 to 1987-88)?

- Public research universities increased their posted price from an average of $549 to $1,701, an increase of 210%. Increases were highest in the south, from $459 to $1,532, or 234%. The Northeast experienced the slowest rate of increase, 209% from an average of $593 in 1972-73 to $1,835 in 1987-88.
- Public regional state colleges and universities increased their tuition and required fees from an average of $466 to $1,380, or 196%. The largest increase occurred in the south, from $398 to $1,239, or 211%. The smallest increase was in the northeast, from $606 to $1,715, or 183%.
- Tuition and fees data for community colleges was unavailable prior to 1978-79. In the 10 years of available data, community college tuition and required fees increased 101% from an average of $387 to $780. The largest increase was in the south, from $304 to $661, 118%, but the lowest was in the north central region, $509 to $999, or 96%.

(2) How much did state appropriations increase in the last 15 years (1972-73 to 1987-88)?

State support for public higher education and related activities increased from $8.5 billion to $34.0 billion, or 300%. Public higher education in the south experienced the largest gain in state support, 354%, from $2.5 billion to $11.3 billion. The north central states increased their support for public higher education the least, 232%, from $2.4 billion to $7.9 billion.

NOTE: For the study, tuition and required fees are the posted price, not the net price, for a year's schooling. The tuition and required fees used are the announced institutional price, not the price students pay for a year of collegiate study once student financial aid, tuition waivers, and discounts are included. State appropriations are the amounts states have approved in their budgets for higher education and related activities, and not the fiscal year expenditures.

(3) How much did resident undergraduate tuition and required fees at universities and regional state colleges and universities change over the 15-year period, 1972-73 to 1987-88? How much did HEPI, CPI and PCDI change?

- University tuition and fees increased 210%.
- Regional state colleges tuition and fees increased 196%.
- Higher Education Price Index (HEPI) increased 175%.
- Consumer Price Index (CPI) increased 172%.
- Per Capita Disposable Income (PCDI) increased 212%.

A Turning Point in the Early 1980s

The point-to-point comparisons above show that per capita disposable income is the only economic indicator that increased faster than tuition and fees over the 15-year period in question. Both HEPI and CPI increased at a slower rate than tuition between 1973 and 1988. However, average tuition and fee increases only began to outpace these economic indicators after 1982-83. Prior to that tuition and fee increases lagged behind both the CPI and HEPI.

Table 1 shows the annual percent increases in HEPI, CPI, PCDI, university tuition and fees, regional state college and university tuition and fees, and state appropriations for the period 1972-73 to 1987-88. Table 1 shows that the patterns of annual percent increases for these measures are similar -- sharp increases in early years followed by dramatic slowing in the rate of increase in later years. These indicators reflect the period of high inflation in the late 1970s and early 1980s followed by a sharp downturn in economic activity in 1981 and 1982.

This period of high inflation in the late 1970s and early 1980s was also associated with relatively high state and local appropriations. The economic downturn in 1982, however, reduced many states' tax revenues and, as a result, state and local appropriation

increases in the following year were cut to about half what the increases had been in previous years.

Table 1
Annual Percent Increase in Per Capita Disposable Income (PCDI), the Consumer Price Index (CPI), the Higher Education Price Index (HEPI) Public University and State College Tuition, and Total State Appropriation

Year	PCDI	CPI	HEPI	University Tuition	College Tuition	State Appropriations
1973	---	---	---	---	---	---
1974	8.5	8.9	7.1	3.8	4.1	15.5
1975	9.0	11.2	8.5	4.0	3.7	11.5
1976	8.7	7.1	6.7	5.9	5.6	14.7
1977	9.0	5.8	6.5	7.8	5.6	10.2
1978	11.3	6.8	6.7	5.9	6.6	11.3
1979	10.3	9.3	7.7	5.6	5.4	10.0
1980	9.7	13.3	9.8	6.5	6.7	12.3
1981	9.7	11.6	10.7	9.2	7.1	9.9
1982	5.2	8.7	10.0	15.6	16.8	8.7
1983	6.5	4.3	6.3	11.7	12.0	5.2
1984	8.8	3.7	5.4	12.1	10.8	6.6
1985	5.5	3.9	6.8	7.5	7.4	11.2
1986	5.4	2.9	4.4	7.9	7.0	8.3
1987	4.4*	2.2	4.2	7.7	7.5	5.3
1988	6.4*	4.6*	4.0*	6.9	7.0	5.2

Sources: Bureau of Labor Statistics (CPI, PCDI)
Research Associates of Washington, D.C. (HEPI)
Illinois State University, Center for Higher Education (Appropriations)
Washington Council on Postsecondary Education (Tuition)

*Projected

Undergraduate Tuition and State Appropriations

A popular characterization of public institutions of higher education is that they are expenditure driven. That is, institutions first plan their academic, research and public service programs, then calculate needed resources, and then seek revenues to implement

their plans. State and local appropriations are primary sources of revenues in the public sector; tuition is secondary. If appropriation increases do not meet expectations, tuition is adjusted to compensate. For example, Colorado State University did not include a tuition hike with its 1988-89 budget but alerted its students that they may not escape a tuition increase. University officials indicated that it was too early to predict whether a tuition hike was needed because it "depends on how much of the requested $9.6 million increase in state money will be approved by the legislature" (Rocky Mountain News, January 7, 1988). In Illinois, twice in the last five years, public institutions have instituted "mid-year" tuition increases after state appropriations fell far short of expectations.

While this oversimplifies a very complex and dynamic process, it does suggest that lower appropriation increases are associated with higher tuition increases and vice versa. Responses of state higher education finance and executive officers tend to confirm this relationship. The data presented in Appendix 1 show that, although states and regions differ, in general larger tuition increases are associated with lower state and local appropriation increases.

Tuition and Per Capita Disposable Income

Table 2 displays the cumulative percent increase in per capita disposable income (PCDI) and university and state college tuition and required fees for the period 1972-73 to 1987-88. This table shows that PCDI increased faster than tuition and required fees through 1982. From 1983 on, sharp increases in tuition, coupled with a slowing in the increase in PCDI, have resulted in average tuition and fees comprising approximately the same percentage of PCDI in 1988 as in 1973. In 1972-73 average university tuition and fees represented 12.3 percent of PCDI and in 1987-88 it represented 12.2%. In 1972-73, average state college tuition and fees represented 10.4% of PCDI and in 1987-88 represented 9.9%.

Table 2
Cumulative Percent Increase in Per Capita Disposable Income,
Average University and Regional State Colleges
Tuition and Required Fees From 1972-73 to 1987-88

Year	PCDI	University Tuition	State College Tuition
1973	0.0	0.0	0.0
1974	8.5	3.8	4.1
1975	18.3	8.0	7.9
1976	28.5	14.4	13.9
1977	40.1	23.3	20.4
1978	55.9	30.6	28.3
1979	71.9	37.9	35.2
1980	88.6	46.8	44.2
1981	106.9	60.3	54.5
1982	117.7	85.2	80.5
1983	131.8	106.9	102.1
1984	152.1	132.1	124.0
1985	165.9	149.4	140.6
1986	180.4	169.0	157.5
1987	192.8	189.8	176.8
1988	211.5	209.8	196.1

In Summary

Tuition and required fees have increased substantially in the last 15 years. But per capita disposable income, the income students and parents use to pay tuition, has increased commensurately. State appropriations also have increased substantially. This study shows that the economic recession of the early 1980s substantially changed the relationship between state support of public higher education and the posted price or tuition at public colleges and universities. It remains to be seen if the relationship which existed prior to the early 1980s, one where substantial increases in state support kept increases in tuition low, ever again emerges.

HISTORICAL ISSUES OF PRICE

The Past: Focus on Access

Following World War II, much of the debate regarding the pricing and financing of postsecondary education took place in the context of efforts to provide and expand access to traditionally unserved students. The federal government became a significant participant for the first time in postsecondary education financing with enactment of the Serviceman's Readjustment Act (GI Bill) in 1944. This legislation set a precedent for federal financing of student's cost of education through financial aid to the student.

In 1947, the President's Commission on Higher Education for Democracy expanded the scope of the debate on pricing, financing, and access in one of the first national statements of major consequence. The Commission called for tuition-free education for all youth through the first two years of college, financial aid for needy but competent students through the sophomore year, and lower tuition charges in upper-division, graduate and professional schools. The Commission also recommended the expansion of adult education, the elimination of barriers to equal access in higher education, the development of a community college system, and a rededication to general education.

The Soviet Union's launching of Sputnik in 1957 led Congress to enact the National Defense Education Act in 1958. The Act provided for federal funding of undergraduate student loans, graduate fellowships, institutions offering teacher education programs, and education in the sciences, mathematics and foreign languages (Levin 1978). While the overall goal of each of these programs was to expand access to postsecondary education, as a group they lacked coherence. The programs were implemented without benefit of a plan or policy for federal involvement in higher education (Babbidge and Rosenzweig 1962). It was an era when:

> Each program was established to satisfy a real or imagined specific need with little or no reference to the effect of one program on other programs, on the general health and vitality of the institution, or on the traditional sources of funding. Each program rested on its own justifications, with a resultant topsy-like growth of an almost bewildering array of separate, specific categorical programs, supporting in their totality, almost everything connected with an institution of higher education except the institution itself (Stampen 1980, p. 5).

Expansion pressures in American postsecondary education necessitated a coherent national plan and policy for federal involvement in funding students and institutions. In 1965, Congress enacted the first omnibus legislation for higher education. The Higher Education Act of 1965 provided authorization for federal funding of activities at public and private colleges which were in the nation's interest, as well as student aid to promote access for low-income students. The authorized programs included federal aid for research, libraries, recruitment of disadvantaged students, educational facilities, developing colleges, community colleges, occupational education, and programs for improving undergraduate education. Student aid was provided through educational opportunity grants for low-income students, guaranteed student loans, work study and graduate fellowship grants.

While the 1965 Higher Education Act significantly reinforced the concept of publicly subsidized tuition through direct student financial aid, it did not settle the debate over the relative levels of tuition and student aid. This debate revolves around the relative merits of offering postsecondary education at low or no cost by subsidizing institutions or by charging higher tuition rates with compensation provided to needy students via financial aid.

The Low Tuition Argument

The low or no tuition argument assumes society as the primary benefactor of an educated citizenry, a benefit "external" to the individual (Bolton 1971). Thus, the full or a substantial portion of instructional costs should be financed by state and federal support of institutions. Proponents of this mode of financing access to postsecondary education suggest

individuals should assume limited responsibility for financing their education (MacDonald 1977).

The low or no tuition approach to postsecondary education pricing and financing is closely aligned with positions advocating universal access. Such a policy enables students who may be fearful of failing in college or are hesitant or lack complete knowledge about sophisticated financial aid arrangements to enroll -- conditions that may be especially true of minorities. Low or no tuition also gives older and part-time students who previously were not eligible for student financial aid the chance to enroll, or reenroll (American Council on Education 1975).

Some economists argue against low tuition, claiming that low tuition (and its consequent high state support) subsidizes the higher consumption of postsecondary education by middle- and upper-income students compared to the rate of consumption by lower-income students. Such policies, critics claim, inappropriately re-distribute tax benefits (state support) to upper-income families from lower-income families who already pay a disproportionate share of regressive state taxes. Low tuition is also argued to be an inefficient method for financing higher education. Many students could afford to pay more than the existing low price at many public colleges and universities with little need of public subsidy (MacDonald 1977).

The High Tuition Argument

Proponents of high tuition, coupled with adequate student aid, would charge students a much higher proportion of instructional costs with smaller direct institutional subsidy from state or federal sources. Such advocates argue that the majority of the benefits of higher education accrue to individuals who should, therefore, finance a major part of it themselves. Government role and responsibility should be directed primarily to providing financial aid that is awarded directly to students (MacDonald 1977).

A variation on the high tuition-high financial aid argument holds that higher education should be entirely financed by student loans where repayment would be based on students' future incomes (Zacharias 1967). In this plan, based on economic theories promoted by Milton Friedman (1968), all students would be eligible for such loans and repayment would be added to individuals' income taxes over their working lifetimes. Those who earned more would repay more of the full cost of their education and those who earned less would repay less. In this way, future high-income recipients would subsidize those who earned less by repaying more of the total cost of their education. Such a scheme would allow tuitions to rise sharply, and the revenue derived would cover a greater proportion of the total costs of providing higher education. Friedman's plan would price higher education at its full instructional cost and have it operate entirely without public subsidy. Similar plans have been revived in recent discussions by Reischauer (1988). The Rivlin Report (1969) recommended that federal aid consist entirely of grants and loans to students of low-income families. This plan would provide institutions with cost-of-education allowances in proportion to the number of low-income students they enrolled.

High tuition advocates argue that such policies, balanced by financial aid, are equitable to the needy, promote choice among institutions, remove burdensome regulations, and improve the quality of education through fair competition among institutions (Stampen 1980). This approach also provides a rationale for financing postsecondary education that different special interest groups can support. State governments often support the high tuition argument because tax dollars can be saved or reallocated without loss of educational services. Proponents in independent colleges and universities often support such an approach because it reduces the tuition gap between this sector and public institutions.

The Reports

The significance of the debates over postsecondary education pricing and financing strategies was underscored by the publication of no less than seven major reports in the

early 1970s.[1] While each report focused on slightly different issues in relation to the price of American higher education, similar recommendations regarding pricing and financing were made. Among them was a recommendation by the Carnegie Commission (1973) that tuition at four-year public institutions be set at 33% of instructional costs. The Committee on Economic Development (1973) recommended tuition be even higher -- 50% of instructional costs at all types of institutions. Each report also recommended student aid for students from low-income families as the means of helping them finance the higher tuition levels. Higher tuition rates in the public sector were also recommended as the method for reducing the tuition gap between public institutions and private colleges and universities.

Empirical Research on Price

These national reports reinforced the concept of using pricing and financing policies as the principal method of providing access and choice in higher education. It is no surprise, then, that the majority of empirical research on price has focused on the relationship between tuition and enrollment. In the last fifteen years nearly thirty empirical studies have attempted to establish the relationship between tuition and enrollment.

Leslie and Brinkman (1987) provide an excellent comparison of 25 of these studies and attempt to standardize their approaches and generalize from their results. While the caveats are many, the authors do suggest that student price response coefficients (SPRC) in the range of -0.6 to -0.8 tend to encompass a large number of study results. That is, many studies suggest that a $100 increase in tuition (in constant dollars) is most likely to result in an enrollment decrease of less than one percent.

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[1] Report on Higher Education (Newman 1971); Higher Education: Who Pays? Who Benefits? Who Should Pay? (Carnegie Commission on Higher Education 1973); The Management and Financing of Colleges (Committee on Economic Development 1973); National Policy and Higher Education (Newman 1973); Financing Postsecondary Education in the United States (National Commission on Financing Postsecondary Education 1973); Policy Alternatives Toward Graduate Education (National Board on Graduate Education 1974); and Financing of Postsecondary Education with Special Reference to the Private Sector (National Council on Independent Colleges and Universities 1974).

The policy implications of such low coefficients were quickly understood.

> The consequence of a low tuition elasticity, from a policy perspective, works against public policy efforts to increase enrollment. A great proportional decrease in tuition is required to generate a given proportional increase in enrollment. It does work to the advantage of institutions when they may have to raise the tuition level to meet rising costs. A low elasticity assures them that an increase in tuition will not result in a drop in revenue even if some students decide to leave the institution. ...At the point at which elasticity exceeds one, an institution will lose revenue (Hyde 1977, p. 5).

Dramatic accounts of unsensitivity and even positive enrollment shifts in the face of tuition increases have appeared in recent years (Breneman 1988).

While such behavior seems isolated to a few highly selective institutions, it does signal the emergence of a new dimension in the debate on price, financing, and the role of higher education in today's society.

A Context for the Current Debate: Focus on Quality

The debates about public higher education price and financing throughout the 1960s and 1970s rarely questioned the value of higher education. In fact, as the previous section documented, the value of higher education, both to students and to society, was a basic premise put forth by most arguments. In recent years, however, the public debate has broadened to include a qualitative dimension. Questions about the quality of American higher education, coupled with sustained tuition increases over the past decade, have given rise to legitimate concerns about higher education's costs, the price charged to students (and therefore government via student financial aid programs), and the value of higher education's contributions. A number of national reports focused specifically on improving the quality of the educational experience, especially the undergraduate experience.[2]

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[2]Most Notably Involvement in Learning: Realizing the Potential of American Higher Education (National Institute of Education 1984). Other reports on undergraduate education

At the states' level, the Education Commission of the States called for increased state attention to the quality of undergraduate education in its report Transforming the State Role in Undergraduate Education (1986). Mingle and Walker (1985) documented a variety of efforts designed to enhance the quality of public higher education and to promote a more central role in statewide economic development efforts. Programs to endow faculty chairs, to review undergraduate general education, to create "centers of excellence," and to develop formal business-university linkages are just a few of the special initiatives documented by state higher education officers.

Whether or not the current focus on quality and economic development represents a fundamental shift in priorities in higher education or an episode in a cyclical pattern of issues remains to be seen. Hansen and Stampen (1987) have argued that issues of access and choice have alternated in priority with issues of quality in cycles over the last forty years. They suggest that:

> 1. There seem to be cycles in the resources devoted to the pursuit of the goals of quality and access. Measures of quality moved almost identically with measures of access -- as one increased the other decreased and vice versa.
>
> 2. The data show the heavy emphasis on access in the late 1940s which gradually diminished with the rising focus on quality in the late 1950s and early 1960s. The trend then shifted to access beginning in the late 1960s and continued through the 1970s followed by a shift back to quality in the early 1980s.

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[2](continued)
include: To Reclaim a Legacy (Bennett 1984); Integrity in the College Curriculum (Association of American Colleges 1985); Access to Quality Undergraduate Education (Southern Regional Education Board 1985); Time for Results: The Governors' 1991 Report on Education (National Governors' Association 1986); Choosing Quality: Reducing Conflict Between the State and the University (Newman 1987); College: The Undergraduate Experience in America (Boyer 1987); and Results in Education: 1987 (National Governors' Association 1987).

On the basis of these findings they concluded:

> First, there do seem to be alternating swings in the emphasis given to the goals of quality aand access. Second, a shift in public and institutional priorities seems to be underway, away from access and toward quality. Third, so far, the shift of interest toward quality is being financed largely by students through tuition increases and through institutionally provided financial aid rather than from traditional sources of support such as state and local taxpayers, and private donors (p. 3).

In testimony before the House Subcommittee on Postsecondary Education, Gordon Davies (1987) described Virginia's efforts to finance quality improvement and other programs such that the impact on tuition increases could be minimized.

> Virginia has found some ways to provide for off-budget funding during the past several years. A Funds for Excellence Program, for example, has encouraged institutions to try new educational approaches, particularly curricular revisions, without mandating tuition increases as a result of the new state money provided. A debt-financed, self-perpetuating equipment trust fund, unique among the states, helps institutions acquire instructional and research equipment on a regular basis without increasing tuition (p.10).

The debate over price and quality is far from settled and a comprehensive examination of its scope and origin is beyond the purpose of this monograph. A major context for understanding the debate, however, is the economic climate that colleges and universities faced in the last decade and a half. The "roller-coaster" economic conditions of the mid-1970s and 1980s affected higher education in at least two ways that impinge on the price/cost debates. First, the transition from high inflation to severe recession subjected colleges and universities to substantial economic hardships not unlike those faced by other sectors of the American economy. Second, the conditions generated a significant increase in activities and programs designed to improve higher education's products and contribute more directly to the states' efforts to revitalize their economies. These activities and programs

often increased the size and scope of institutions and were not without costs themselves, putting further pressure on already beleagured budgets.

Table 3 displays the annual percent increases in three pertinent economic indicators: per capita disposable income (PCDI), the Consumer Price Index (CPI), and the Higher Education Price Index (HEPI) for the period 1974 to 1988. Absolute values for each of these indicators are presented in Appendix 2.

The pattern of increases in these three indicators is similar: single-digit percent increases in the mid to late 1970s followed by double-digit increases in the late 1970s and early 1980s, and a substantial slowing of the rate of increases in the mid to late 1980s. These indicators reflect the period of high inflation in the early 1970s and again in the late 1970s and early 1980s, followed by a sharp downturn in the economy after 1981-82.

Comparing the three indicators themselves reveals an interesting pattern. Double-digit increases were first exhibited in per capita disposable income in 1978 and 1979, followed by double-digit increases in the CPI two years later. The Higher Education Price Index increases were double-digit in 1981 and 1982 but never did hit the levels of PCDI or the CPI. At the same time, HEPI did not fall off as quickly or as far as did the CPI. Figure 1 graphs these annual percent changes in these indicators and makes the lagged increases easier to see.

Table 3 also displays the percent increases in resident undergraduate tuition at public universities and at public four-year state colleges and in state and local appropriations for the same period. The pattern of increase in resident undergraduate tuition follows the pattern in the three economic indicators but again with about a one year lag in double-digit increases. The most notable feature about the pattern of tuition increases is the very low increases during the 1970s compared to those of the three economic indicators, followed by substantially higher increases in the early 1980s, and a gradual slowing in the mid to late 1980s that is still higher than the rates for the PCDI, the CPI and HEPI.

Table 3
Annual Percent Increase in Per Capita Disposable Income (PCDI), the Consumer Price Index (CPI), the Higher Education Price Index (HEPI) Public University and State College Tuition, and Total State Appropriation

Year	PCDI	CPI	HEPI	University Tuition	College Tuition	State Appropriations
1973	---	---	---	---	---	---
1974	8.5	8.9	7.1	3.8	4.1	15.5
1975	9.0	11.2	8.5	4.0	3.7	11.5
1976	8.7	7.1	6.7	5.9	5.6	14.7
1977	9.0	5.8	6.5	7.8	5.6	10.2
1978	11.3	6.8	6.7	5.9	6.6	11.3
1979	10.3	9.3	7.7	5.6	5.4	10.0
1980	9.7	13.3	9.8	6.5	6.7	12.3
1981	9.7	11.6	10.7	9.2	7.1	9.9
1982	5.2	8.7	10.0	15.6	16.8	8.7
1983	6.5	4.3	6.3	11.7	12.0	5.2
1984	8.8	3.7	5.4	12.1	10.8	6.6
1985	5.5	3.9	6.8	7.5	7.4	11.2
1986	5.4	2.9	4.4	7.9	7.0	8.3
1987	4.4*	2.2	4.2	7.7	7.5	5.3
1988	6.4*	4.6*	4.0*	6.9	7.0	5.2

Sources: Bureau of Labor Statistics (CPI, PCDI)
Research Associates of Washington, D.C. (HEPI)
Illinois State University, Center for Higher Education (Appropriations)
Washington Council on Postsecondary Education (Tuition)

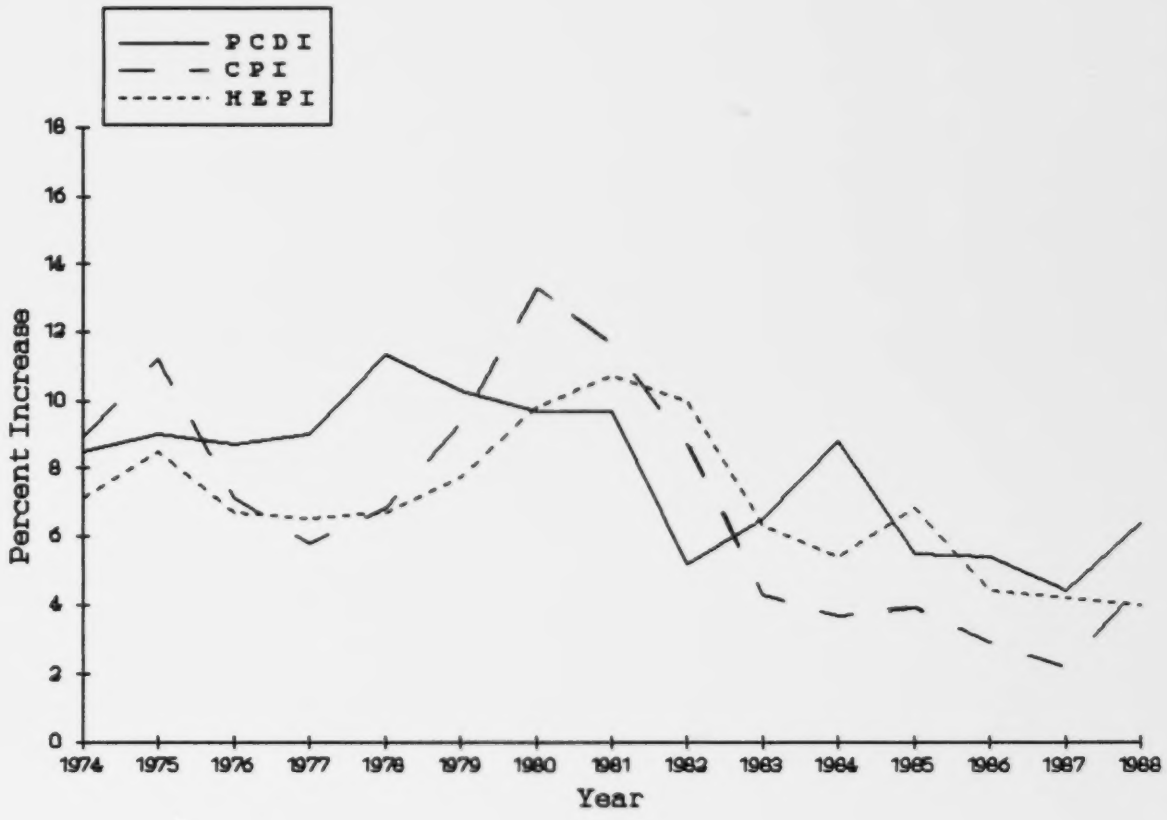
*Projected

Recent History: Emerging Trends or Short-Term Memory

It is precisely this pattern of tuition increases which have been greater than these indices over the last six or seven years that has generated such intense debate about the price of higher education. Figure 2 displays the cumulative percent increases in resident undergraduate tuition at universities and state colleges and the cumulative percent increases

Figure 1

Annual Percent Increase in Per Capita Disposable Income (PCDI), the Consumer Price Index (CPI), and the Higher Education Price Index (HEPI): 1974 to 1988



Sources: Bureau of Labor Statistics (CPI,PCDI)
Research Associates of Washington D.C. (HEPI)

in the CPI for the 1980s. As Figure 2 shows, undergraduate tuition increases have exceeded the CPI during this decade. Figure 3 compares the same tuition increases with the HEPI and shows the same pattern as Figure 2. A longer perspective on these comparisons, however, suggests that the overall pattern of increases between tuition and the CPI and HEPI are not that dissimilar. Figure 4 displays the cumulative percent increases in resident undergraduate tuition at public universities and at public state colleges compared to the cumulative percent increases in the CPI for the period 1973 to 1988. Figure 5 compares the same tuition increase with the HEPI. Both these figures show that tuition increases lagged behind the particular economic indicator until just the last two or three years when recent tuition increases caused the cumulative increase over the last decade and a half to surpass the CPI and HEPI.

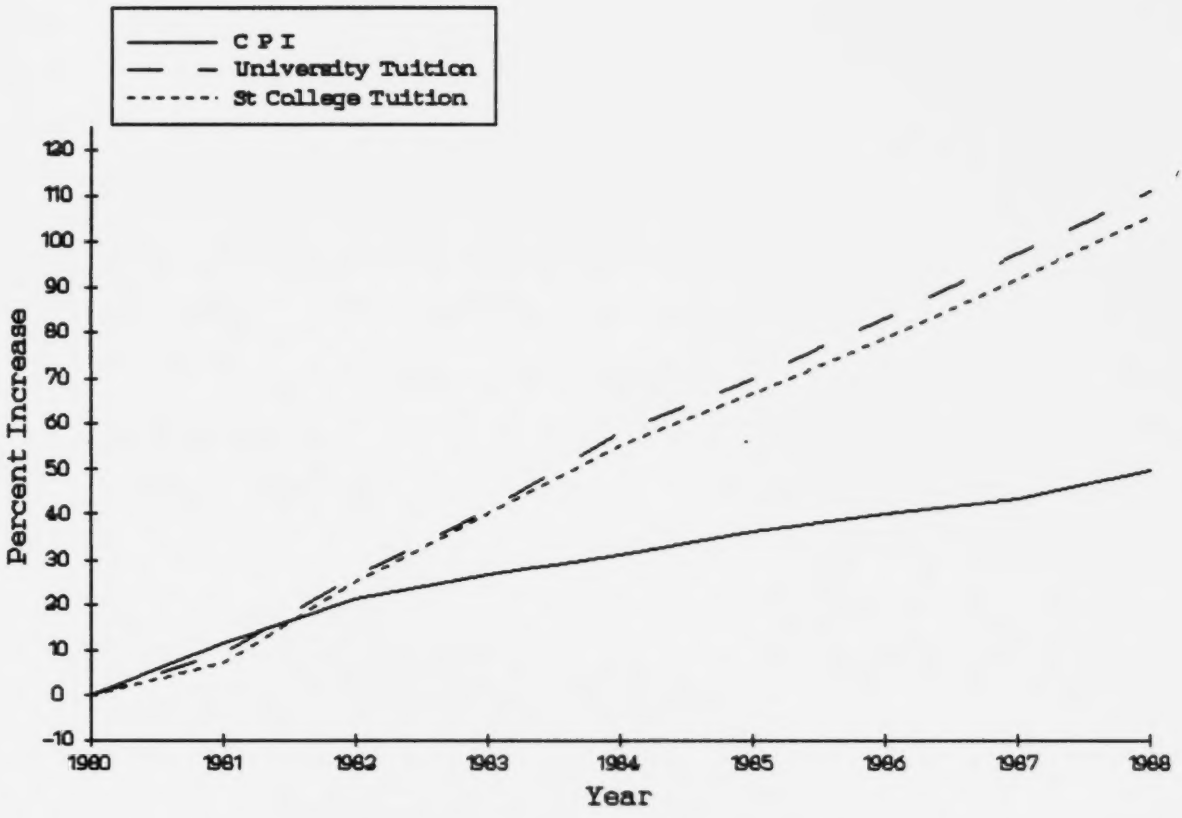
Whether or not recent tuition increases have brought tuition "back-in-line" with economic indicators as the longer time perspective suggests or whether they represent an emerging trend in higher prices for higher education is of little consequence to the students and the parents who are facing the bill and to the public policy makers who must answer questions about the prices charged today. To these individuals recent increases seem out of line with other current relevant economic indicators. To many, these increases are unpredictable and unjustified. One result has been an increase in calls for "rational" pricing policies.

"Rational" Pricing Policies

Beginning in the late 1970s there has been some movement toward indexing the price of higher education (tuition) to the actual cost of education or to an economic indicator like the CPI or HEPI. This development was in direct response to the patterns shown above and the need by states and institutions for some rational and defensible method for determining tuition rates. It was also an effort to establish some methodology for stabilizing the relationship between tuition rate setting and state support. A third reason

Figure 2

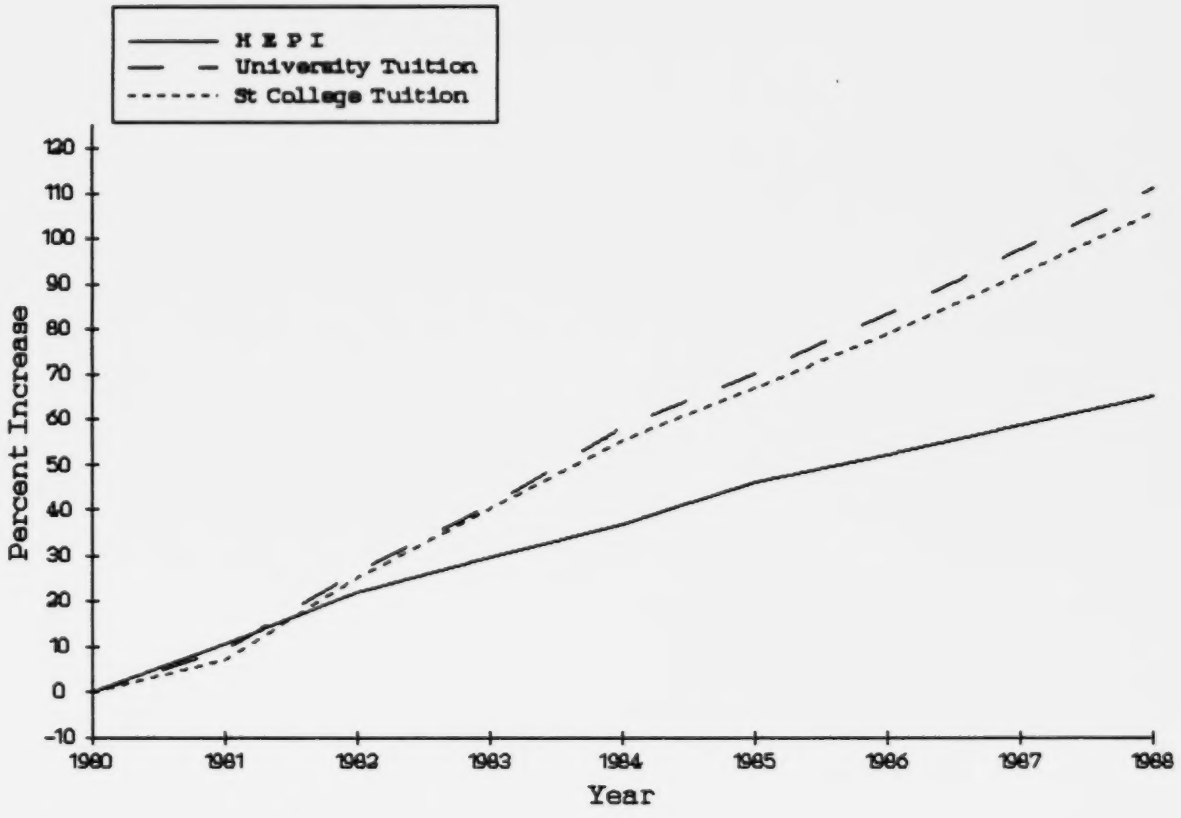
Cumulative Percent Increase in the Consumer Price Index (CPI) and Undergraduate Tuition at Public Universities and State Colleges: 1979-80 to 1987-88



Sources: Bureau of Labor Statistics (CPI)
Washington Council on Postsecondary Education (Tuition)

Figure 3

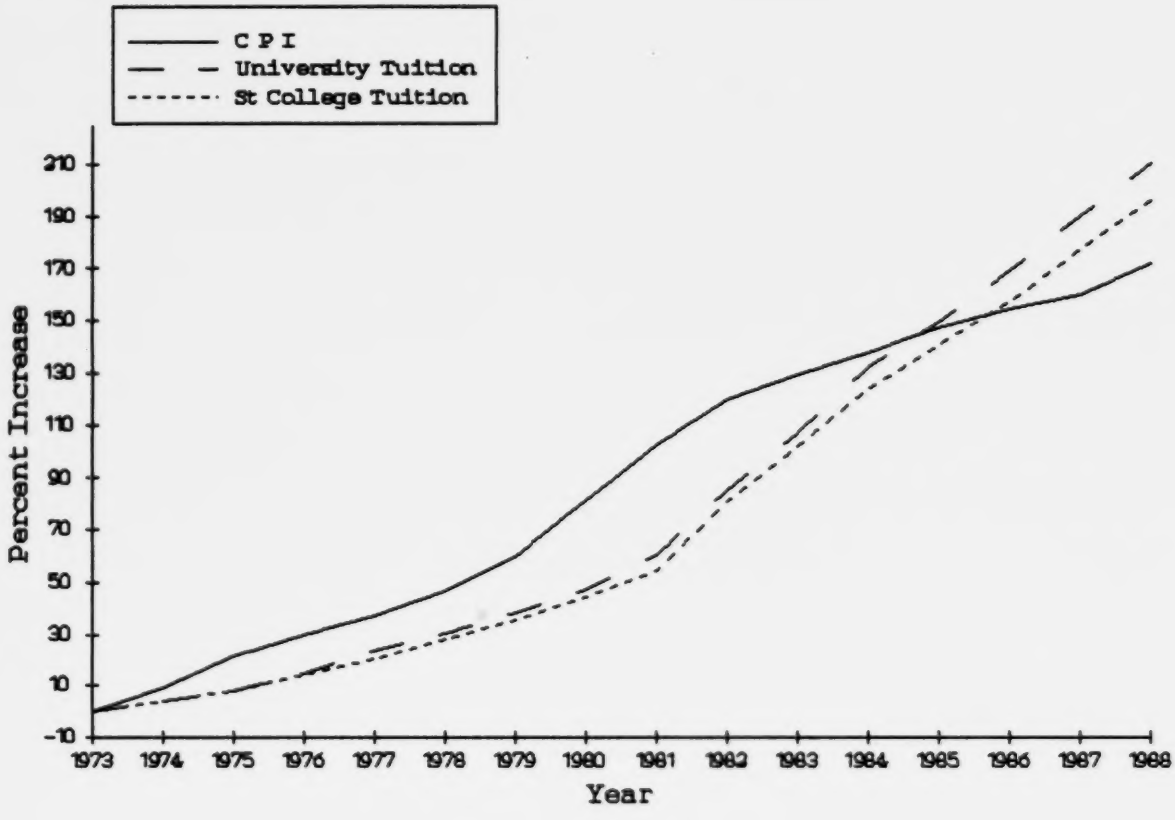
Cumulative Percent Increase in the Higher Education Price Index (HEPI) and Undergraduate Tuition at Public Universities and State Colleges: 1979-80 to 1987-88



Sources: Research Associates of Washington D.C. (HEPI)
Washington Council on Postsecondary Education (Tuition)

Figure 4

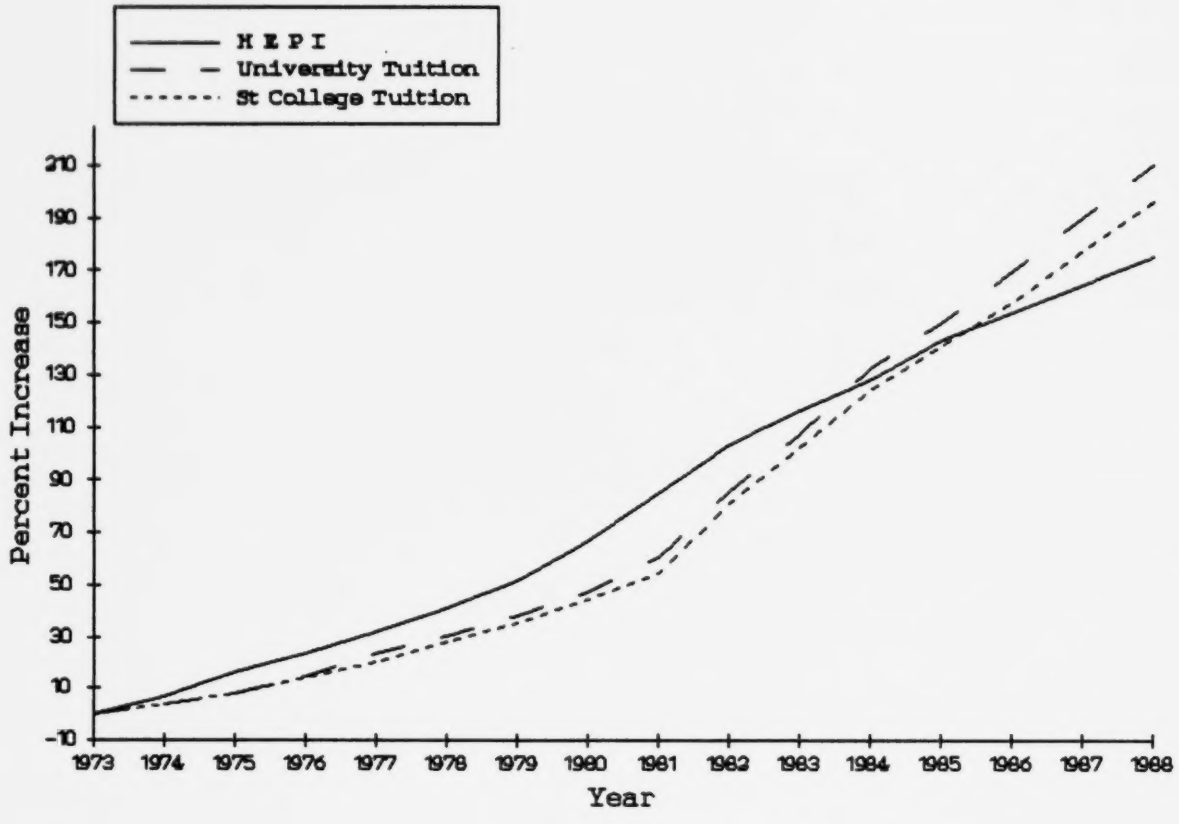
Cumulative Percent Increase in the Consumer Price Index (CPI) and Undergraduate Tuition at Public Universities and State Colleges: 1972-73 to 1987-88



Sources: Bureau of Labor Statistics (CPI)
Washington Council on Postsecondary Education (Tuition)

Figure 5

Cumulative Percent Increase in the Higher Education Price Index (HEPI) and Undergraduate Tuition at Public Universities and State Colleges: 1972-73 to 1987-88



Sources: Research Associates of Washington D.C. (HEPI)
Washington Council Postsecondary Education (Tuition)

for the development of indexing tuition was a response to inequities and inconsistencies that existed in the price of higher education. Differences in tuition among types of institutions, among levels of instruction, between full- and part-time students, and between in-state and out-of-state students in some instances were indefensible (Mingle 1976).

In 1976, eight states were reported to have or were considering formulae for indexing tuition. Five states (Colorado, Florida, Kansas, Oregon and Wisconsin) were setting tuition as a percent of instructional cost. Virginia had a variation of the index being used in these five states. New York and Kentucky were considering indexing plans. The Florida Board of Regents was working toward a plan where tuition would represent 30% of average estimated instructional costs. Virginia schools were expected to raise 30% of their operating revenues from tuition (Mingle 1976).

Viehland, Krauth and Kaufman (1980) reported 20 states as having some established policy, or recommendations, for setting tuition rates. Three states reported having established policies without specific formulae while seventeen states reported policies with established formulae or indexing schemes. One state used the Higher Education Price Index (HEPI), one used the costs of instruction for nonresident students only, one state set charges at rates comparable to peer institutions, and 14 used the cost of education (nonresident tuition only in two of the 14). In 1980, 30 states were reported as having no established policy or indexing formula for setting tuition in the public sector.

By 1982, Lapovsky (1982) found that 22 states had statewide policies or guidelines for setting tuition for public institutions. States varied between having stated policies and having recommendations.

Marks (1987) reported that in 1980 two-thirds of the states nationwide and three-fourths of the states in the South determined tuition in a historical pattern -- incrementally and "set to generate all or most of the difference between what the institution believed it

needed and what state governments appropriated" (page 13). In 1987, the number of states associated with the Southern Regional Education Board having implemented formal policies or mechanisms to determine tuition and fees had increased to half the states. Three mechanisms commonly reported by the states to index tuition were:

1. Tuition is set in relation to an external yardstick, such as the CPI or PCDI,
2. Tuition is set as a proportion of the costs of providing educational programs, or
3. Tuition is set in relation to a group of peer institutions (benchmarking) (Marks 1987).

In 1988, the State Higher Education Executive Officers surveyed state higher education finance officers (SHEFOs) with regard to tuition policies, costs, and student financial aid (Mingle 1988). That survey revealed that eight states (Connecticut, Florida, Georgia, Minnesota, New Jersey, Tennessee, Virginia and Wisconsin) have statutes that set expected tuition revenue as a specified percentage of instructional costs or general state appropriations. Four states (Arizona, California, Illinois and Washington) indicated that tuition and fee rates are established by statutes or rules as a specified percentage of per-student costs or general state appropriations.

In another question, 14 states indicated that they used the CPI and 12 states indicated that they used HEPI either formally or informally in setting tuition levels.

Other investigations of state policies and recommendations for setting tuition rates in the public sector also show the increasing effort on the part of states to develop formal mechanisms for determining the price public institutions should charge (Curry 1988). Other reports are addressing issues related to what factors drive increasing costs for higher education (Brinkman 1988) and what state higher education executive officers believe are the major concerns states have about costs of higher education and how those costs might be contained (Mingle 1988).

Tuition and Per Capita Disposable Income (PCDI)

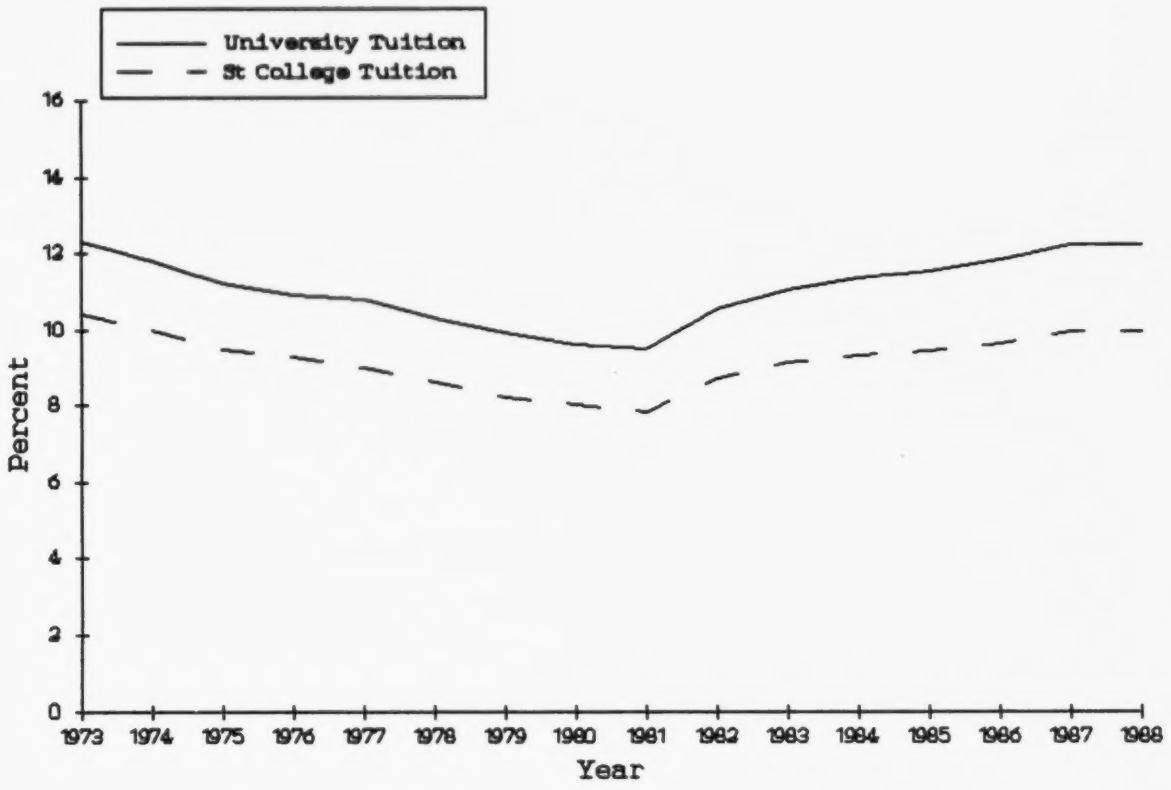
Interestingly, only seven state finance officers indicated in the 1988 SHEEO survey that personal income was considered in setting tuition, and none reported that it was the most important factor (Mingle 1988). The data reported in Table 3 (page 10), however, indicate that per capita disposable income (PCDI) increased faster than did average tuition rates during the 1970s. Figure 6 displays both resident undergraduate tuition at public universities and at public state colleges as a percent of PCDI. The figure shows that tuition in 1986 is actually a smaller percentage of per capita disposable income than it was in 1973.

Tuition and State Appropriation Increases

The preceeding sections have shown that tuition rates at public institutions follow general economic patterns over the long term; however, specific economic indicators are used primarily in an advisory manner in setting tuition. According to state higher education executive and finance officers, tuition levels at public institutions are more often associated with state and local appropriation levels than any other indicator (Mingle 1988). Executive officers in 26 states agreed strongly with the statement that tuition and fee rates in the public sector are driven primarily by the amount of state appropriations available in a given year. Thirteen executive officers indicated that increased state appropriations were occasionally or almost always used as a rationale for "holding the line" on tuition increases. Finance officers in 24 states reported that tuition and fee rates are established by institutional or system governing boards and are viewed "as the difference between institutional needs and state appropriations. Tuition rates are often established after receiving indications of the level of state support to be provided" (Mingle 1988, p. 6). Only 11 finance officers reported that tuition was set with little or no explicit consideration of state appropriations.

Figure 6

Public University and State College Undergraduate Tuition and Required Fees as a Percent of Per Capita Disposable Income (PCDI): 1972-73 to 1987-88



Sources: Bureau of Labor Statistics (PCDI)
Washington Council on Postsecondary Education (Tuition)

Table 3 (page 10) also displays the annual percent increases in state appropriations between 1974 and 1988 and documents the lag in tuition increases compared with increases in state and local appropriations. Rusk and Leslie (1977) succinctly described the short-term relationship between tuition and state appropriations.

> Tuition prices and price increases tend clearly to be higher where the state effort is insufficient to the financial obligations of the institutions. Indeed, of the manipulatable variables studied, adjusting state appropriations seems to be the major way to affect tuition levels. State policy makers should be made aware of this fact not only for the value of achieving desired outcomes, but also for the knowledge that appropriations shortfalls will raise tuition prices just as surely as if the prices had been raised by the legislature (p. 544).

Data analysis of tuition and state appropriation for this monograph shows (Appendix 1) the relationship that Rusk and Leslie described a decade earlier to still be true for the period 1977 to 1988. Increases in undergraduate resident tuition and required fees at public four-year institutions in 46 states were compared to increases in state appropriations for the years 1977 to 1986. On the average, the rate of increase in tuition was correlated -.25 with the rate of increase in state appropriations (i.e., higher increases in state appropriations were associated with lower increases in tuition and required fees). It should be pointed out, however, that this relationship is not uniform across states or regions of the country. In some states, no relationship between tuition increases and increases in state appropriations were found. In only one case, however, was a positive relationship found. That is, only one state exhibited that higher tuition increases were associated with higher state appropriation increases. The detailed tables in Appendix 1 provide results of these analyses.

REGIONAL TRENDS IN HIGHER EDUCATION
PRICE AND STATE APPROPRIATIONS

Tuition and Required Fees in the Public Sector

The previous section discussed historical issues related to price and presented data on tuition and fees at public institutions nationally. This section presents historical trends in the posted price (i.e., tuition and required fees) for resident undergraduates in public higher education by sector and region. It describes trends in the price at major state and research universities, at the regional state colleges and universities, and at community colleges (see Appendix 6 for the list of schools included in the study). The three institutional types are discussed separately because universities, regional state colleges and community colleges differ significantly in mission, role and scope. Trends in state appropriations and in other economic indicators in relationship to trends in tuition are described in subsequent sections.

Universities

Resident undergraduate tuition and required fees at states' universities increased from a national average in 1972-73 of $549 to $1,701 in 1987-88, an increase of nearly 210%. Both the average price and the cumulative percent change over this period varied by regions of the country. Table 4 displays these data and Figures 7 and 8 display the trend in average tuition by region and the cumulative percent change by region. Average tuition and required fees in 1972-73 were highest among public universities in the Northeast, which also had the second highest rate of increase among the four regions. The fastest rate of increase (233.8%) in average tuition and required fees was among public universities in the South which also had the lowest average prices in 1972-73. The rate of increase in the

West allowed public universities in this region to average the lowest tuition and required fees ($1,302) in 1987-88.

Table 4
Average Tuition and Required Fees at Public Universities
in 1972-73 and 1987-88 by Region

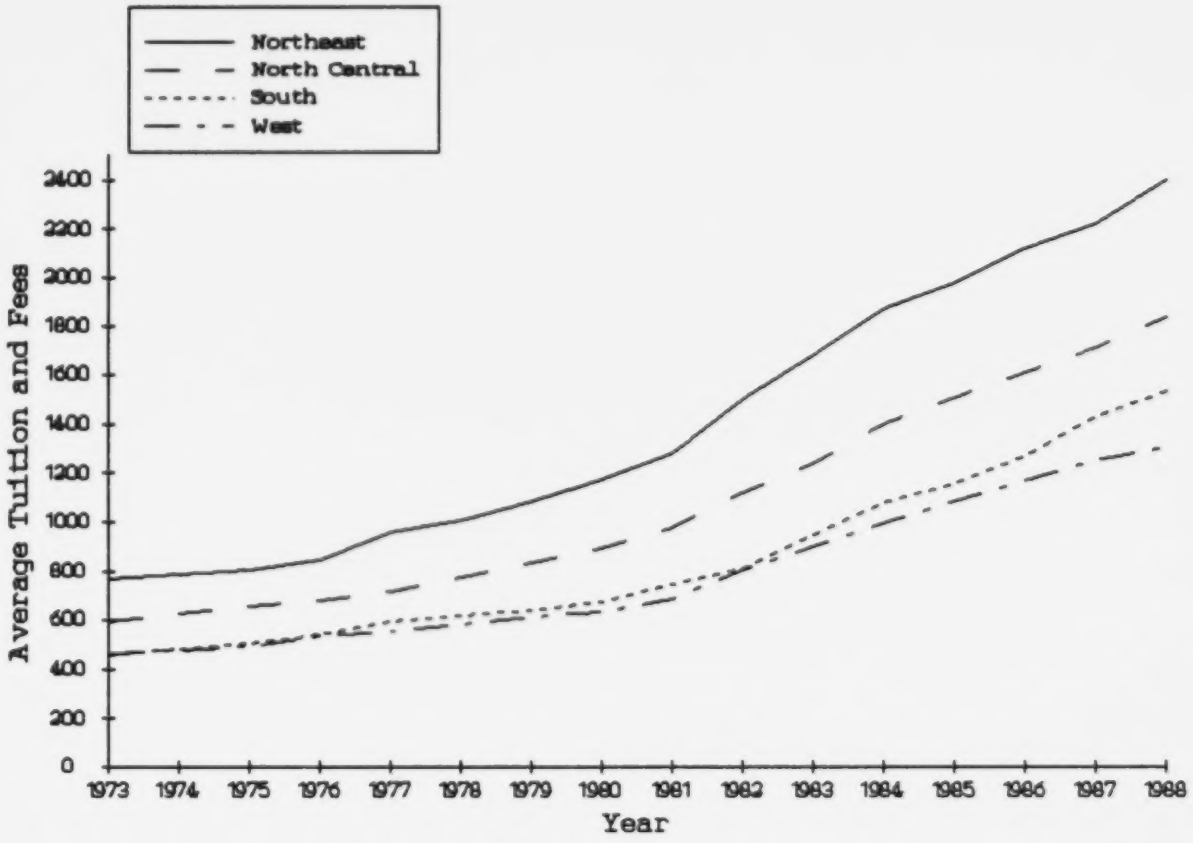
Region	1972-73	1987-88	Percent Change
Northeast	$770	$2,400	211.7 %
North Central	$593	$1,835	209.4
South	$459	$1,532	233.8
West	$466	$1,302	179.4
U.S. Average	$549	$1,701	209.8

Despite these regional differences in average tuition and in rates of change, the most striking feature of Figures 7 and 8 are their similar patterns, especially with respect to the cumulative percent increase shown in Figure 8. All regions showed a slight acceleration in tuition increases in reaction to higher rates of increases in the economic indicators in the year or two preceeding. And all regions showed similar accelerated increases beginning in 1981-82 in reaction to the deep recession of the period.

In the mid-1970s the Northeast experienced a sluggish economy. Traditional industries moved south and the economic expansion the Northeast currently enjoys had not yet begun. The West, by contrast, experienced a booming economy, primarily driven by high prices for oil and research and development in computer-related technologies. The downturn in the Northeast economy was associated with a reduced rate of growth in state support which was

Figure 7

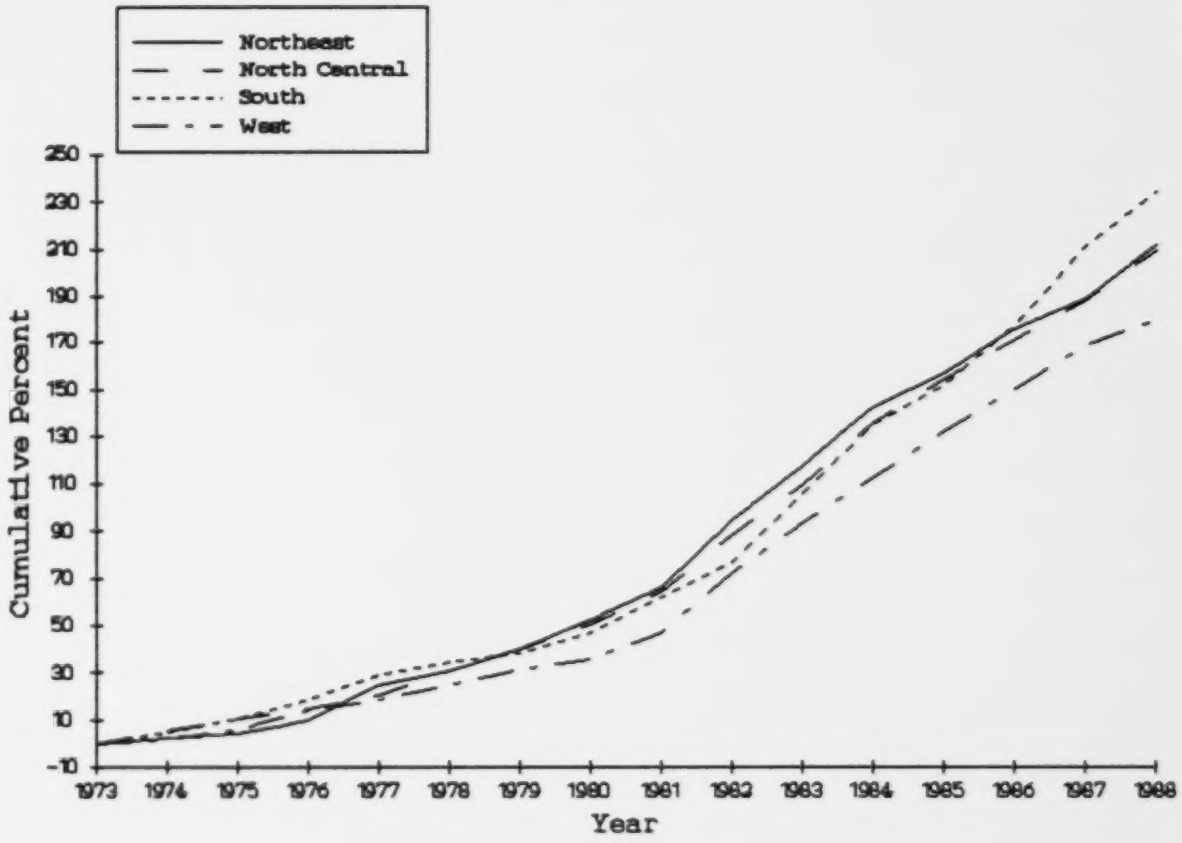
Resident Undergraduate Tuition and Required Fees, at Public Research Universities by Region 1972-73 to 1987-88



Source: Washington Council on Postsecondary Education

Figure 8

Cumulative Percent Increase in Undergraduate Tuition and Required Fees at Public Research Universities by Region from 1972-73 to 1987-88



Source: Washington Council on Postsecondary Education

accompanied by the institutional increases in tuition. At the same time, states in the West were able to increase the rate of growth in their support of public universities which reduced the institutional need for revenue from tuition. Tuition increases in the West were much lower than in the Northeast in the mid-1970s.

The sharp increases in tuition in 1981-82 for all regions reflects the deep recessionary condition of the states at that time. Many states were experiencing unanticipated revenue shortfalls which led to lower than anticipated appropriations for public institutions. In many instances, institutions were using tuition surcharges and mid-year tuition hikes to provide the income needed but lost by the appropriation reductions states were making (Wittstruck 1982). While the rate of tuition increases at public universities have declined in the mid-1980s, they have not declined as fast as economic indicators such as the CPI or HEPI.

Regional State Colleges and Universities

Between 1972-73 and 1987-88 the national average for tuition and required fees for the regional state colleges and universities increased from $466 to $1,380, or 196%. Table 5 presents the average tuition and required fees at these institutions in each year by region.

Like public universities, average tuition and required fees among public state colleges and universities were highest in the Northeast in 1972-73, but unlike public universities, these institutions exhibited the lowest overall percent increase among regions. Also like public universities, the public state colleges and universities in the South exhibited the highest percent change in price over this 15-year period. Similarly, the price for undergraduates at Western state colleges and universities was lowest among all regions in 1987-88. Figure 9 displays the average tuition and fee trends by region for these institutions. Figure 10 displays the cumulative percent increase in tuition and required fees for these institutions over this 15-year period.

Table 5
Average Tuition and Required Fees at Public State Colleges
in 1972-73 and 1987-88 by Region

Region	1972-73	1987-88	Percent Change
Northeast	$606	$1,715	183.0 %
North Central	$506	$1,509	198.2
South	$398	$1,239	211.3
West	$394	$1,136	188.3
U.S. Average	$466	$1,380	196.1

Like public research universities, the most striking feature of both Figures 9 and 10 is the similarity in patterns among regions. While the greater overall increase in the South and the persistence of some regional ranking are of some interest, the almost identical pattern of tuition and fee increases shown in Figure 10 overshadows such regional differences. And like research universities, the pattern of tuition increases in public state colleges and universities shows sharp increases beginning with the recessionary years of 1981-82.

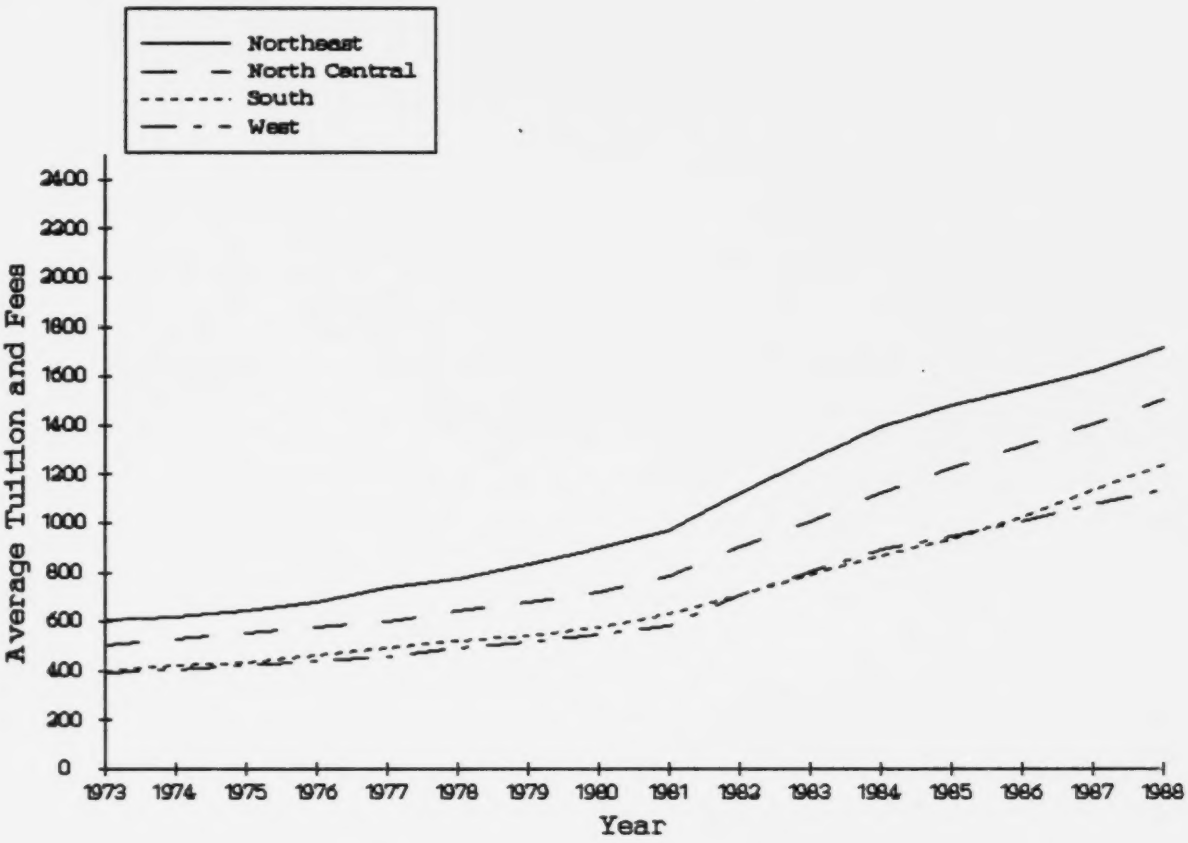
The cumulative percent change over 1972-73 for regional state colleges and universities shows a slow but consistent pattern of tuition increases until 1980-81 (Figure 10). Beginning in 1981-82, compared to 1980-81, the cumulative percentage increase for all regions is almost identical, and quite dramatic but less in magnitude than shown for the universities.

Community Colleges

National tuition and required fee data for public community colleges were unavailable

Figure 9

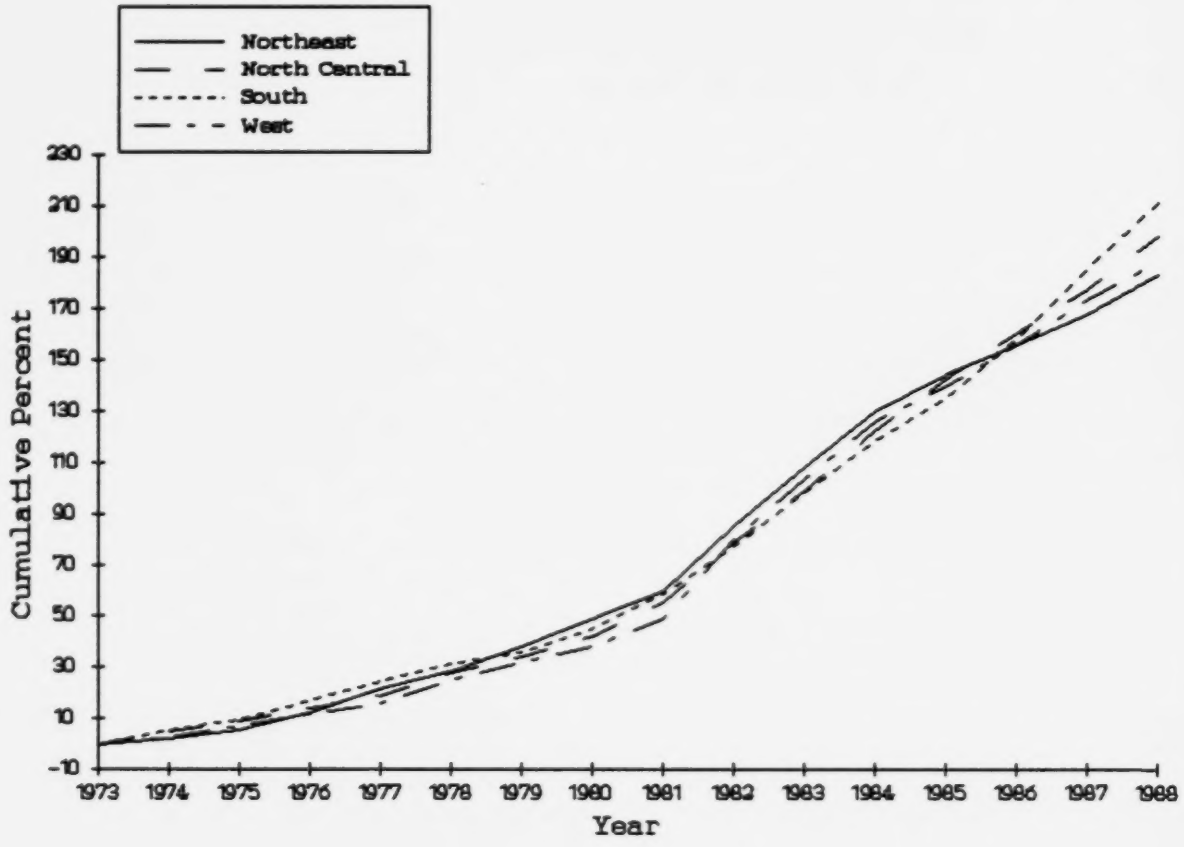
Resident Undergraduate Tuition and Required Fees,
at Public State Colleges and Universities by Region
1972-73 to 1987-88



Sources: Washington Council on Postsecondary Education

Figure 10

Cumulative Percent Increase in Undergraduate Tuition and Required Fees at State Colleges and Universities by Region from 1972-73 to 1987-88



Sources: Washington Council on Postsecondary Education

before 1978-79. The trends in these data from this point are similar to those of the universities and regional state colleges and universities. Table 6 displays the price by region for this sector in 1978-79 and 1987-88.

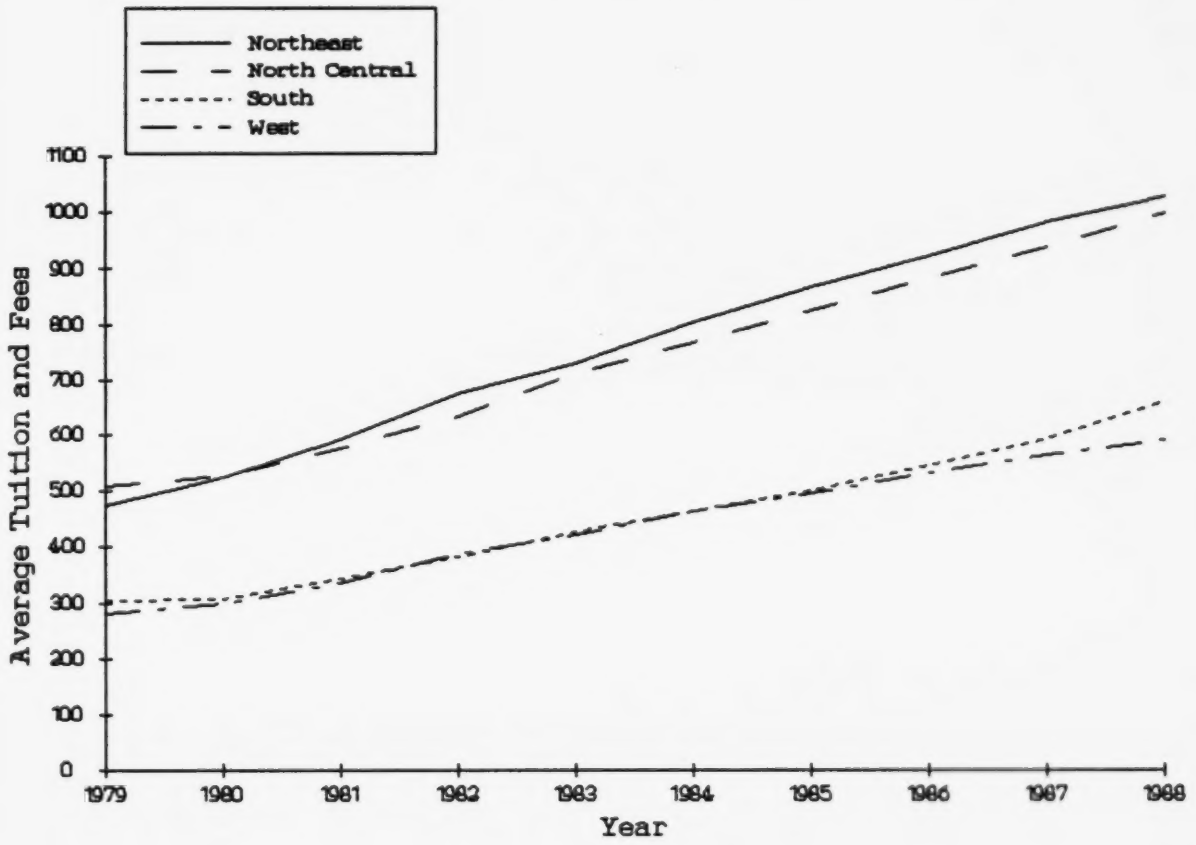
Table 6
Average Tuition and Required Fees at Public Community Colleges in 1978-79 and 1987-88 by Region

Region	1978-79	1987-88	Percent Change
Northeast	$474	$1,027	116.7 %
North Central	$509	$ 999	96.3
South	$304	$ 661	117.4
West	$280	$ 590	110.7
U.S. Average	$387	$ 780	101.6

Table 6 shows that average tuition and required fees at public community colleges were highest in the North Central region and lowest in the West in 1978-79. By 1987-88, while the West still had the lowest average prices, the Northeast region exhibited the highest public community college tuition and fees. Moreover, like public state colleges and universities, the gap between the lowest and highest regions decreased over this period. In 1978-79 public community college tuition and fees in the North Central region were 82% higher than similar prices in the West, while in 1987-88, the Northeast region's average tuition and fees were only 74% higher than similar prices in the West. Figure 11 displays the average tuition and fees at public community colleges over this period, and Figure 12 displays graphically the cumulative percent increase in public community college tuition and required fees by region in this nine-year period.

Figure 11

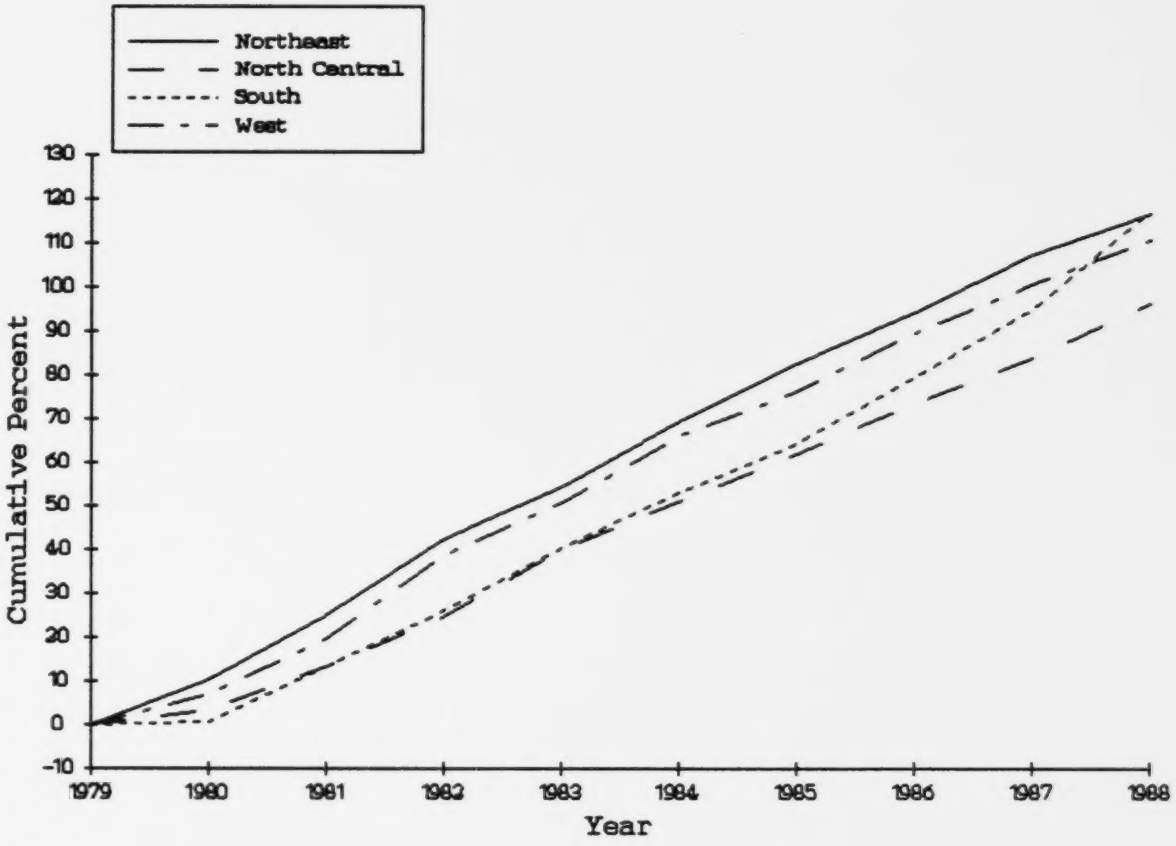
Resident Undergraduate Tuition and Required Fees, at Public Community Colleges by Region 1978-79 to 1987-88



Sources: Washington Council on Postsecondary Education

Figure 12

Cumulative Percent Change in Resident Tuition and Required Fees at Public Community Colleges by Region 1978-79 to 1987-88



Sources: Washington Council on Postsecondary Education

Figure 11 shows that tuition and fee rates at public community colleges in the Northeast and North Central regions are similar and have grown at virtually the same rate since 1978-79. Tuition and fee rates at public community colleges in the South and West are also almost identical but average about 40% less than those in the Northeast and North Central region. The rate of price increases in public community colleges in the South and West is also almost identical since 1978-79.

Figure 12 shows the similar rates of tuition increases in all regions in the last nine years. Unfortunately, comparable national data prior to 1978-79 are not available.

State Appropriations

Table 7 displays the state appropriations for higher education by region in 1972-73 and in 1987-88, along with the percent change. For the fifty states combined, higher education appropriations increased about 300% in this 15-year period.

Table 7
State Appropriations for Higher Education by Region in 1972-73 and 1987-88
(In millions of dollars)

Region	1972-73	1987-88	Percent Change
Northeast	$1,822.8	$ 6,815.5	273.9 %
North Central	$2,367.9	$ 7,852.3	231.6
South	$2,483.4	$11,281.6	354.3
West	$1,838.1	$ 8,092.7	340.3
U.S. Total	$8,512.2	$34,042.0	299.9

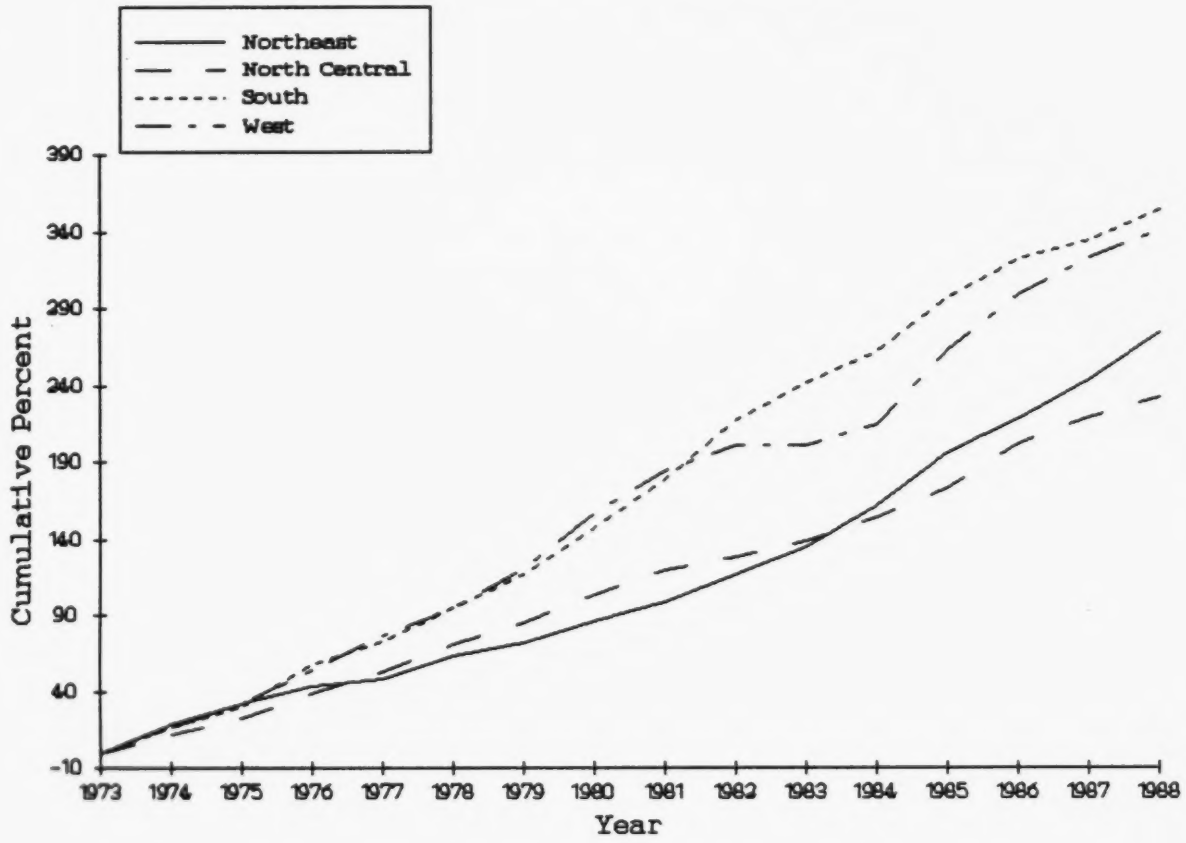
The states comprising the South census region showed the highest percent increase over this period, averaging more than a 10% increase per year. The West region experienced a similar rate of increase also averaging slightly above a 10% increase per year.

Both the Northeast and the North Central states as groups received state appropriation increases at rates lower than the national average. The Northeast states' appropriations increased at an average annual rate of about 9.2% per year, while the North Central region averaged about an 8.3% increase per year.

Figure 13 displays the cumulative percent increase in state appropriations for higher education by region. This figure graphically displays the higher growth rate in state appropriations for public higher education in the South and the West over the last 15 years.

Figure 13

Cumulative Percent Change in State Appropriations for Public Higher Education by Region 1972-73 to 1987-88



Sources: Center for Higher Education, Illinois State University

CONCLUSIONS

Trend analysis is dangerous. Pick one set of end-points and you may derive very different impressions and conclusions than if a different time frame were examined. The 15 years examined in this study (1972-73 to 1987-88) were determined largely by the availability of good useful data. But this 15-year period has the added utility of encompassing rather dramatic shifts in the nation's economic condition and provides a unique opportunity to begin to examine the relationship between that economy, higher education support, and the price charged to students and parents.

The data presented in this report combined with related surveys of SHEEO members suggests that the price of higher education is inextricably linked to public support for higher education and that public support for higher education is linked to the state of the economy. The relationship between price and state appropriations, however, depends on whether you take a long-term or short-term perspective. In the long-term this report has shown that as appropriations increase so do tuition. This can be understood in the context of the state policies or guidelines that recommend tuition represent some proportion of instructional costs.

In the short-term, however, lower than average increases in state appropriations are usually associated with higher than average increases in tuition and required fees, especially at a time when institutions believe that increased spending is mandated or warranted. During the 1980s, many institutions have responded to national criticism about the quality of higher education and its role in the economy by adding programs devoted to promoting economic development, increasing public service, and improving the quality of undergraduate education. Ironically, these efforts have added to the cost of higher education at the very time when state appropriations were leveling off.

Whether or not tuition increases in recent years have been implemented to finance these programs or to "make-up" for lost ground in the 1970s or both is of little consequence to students, parents, and legislators whose memory is considerably shorter than 15 years. Criticisms of recent tuition increases are born out of recent history. And in the last half dozen years, tuition has outpaced the highly visible economic indicators of the CPI and HEPI.

But tuition and fees at public institutions of higher education represent a lower percentage of per capita disposable income in 1988 than they did in 1973. And student financial aid is much more prevalent in 1988 than it was in 1973. The conclusion suggested by these data is that to date tuition increases have not been excessive but they have reached the limit of credibility. Further increases significantly above the CPI or HEPI are likely to result in even more obvious intervention by public policy makers.

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APPENDIX 1

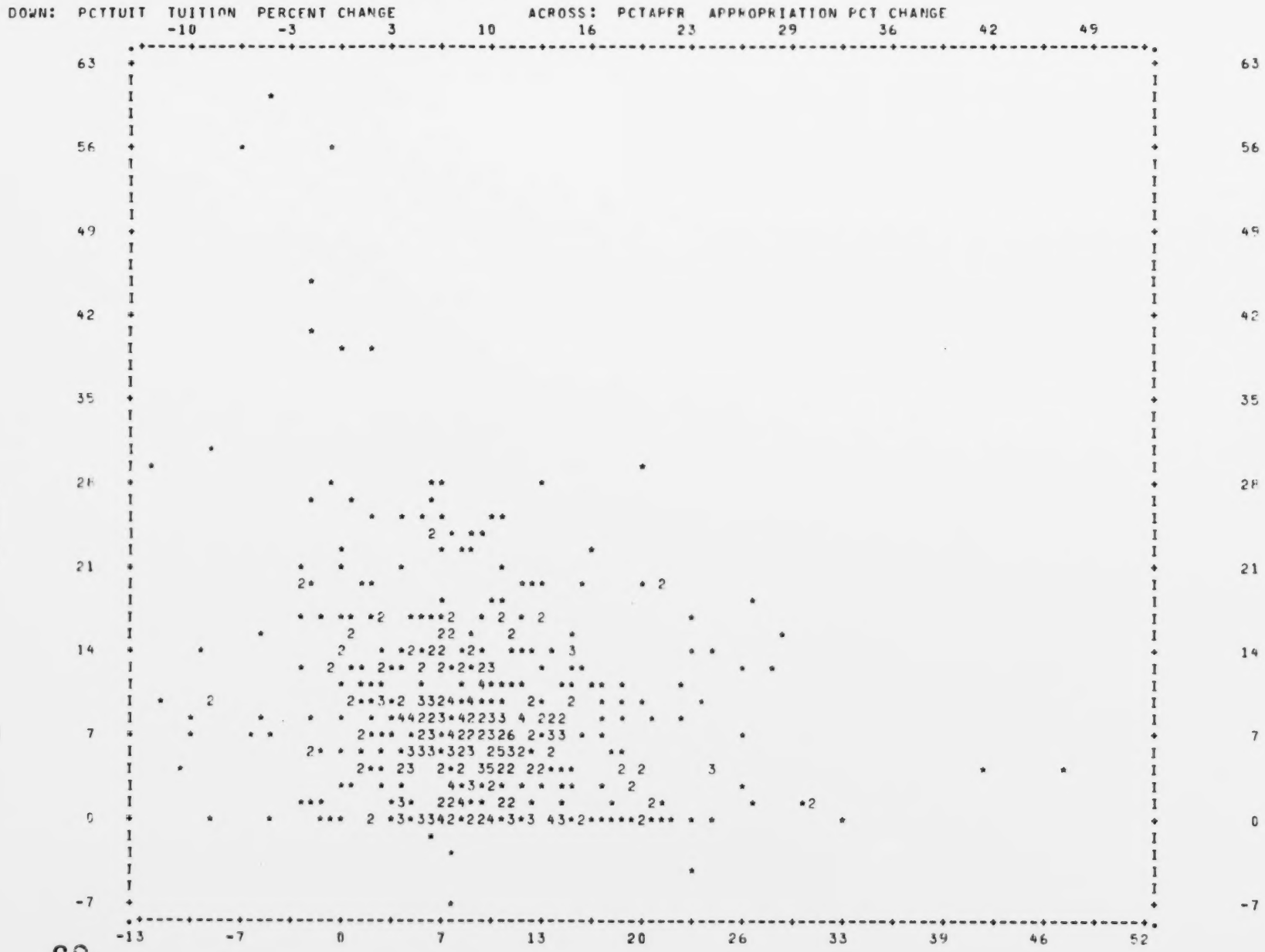
COMPARING INCREASES IN TUITION AND REQUIRED FEES WITH INCREASES IN STATE APPROPRIATIONS: A REGRESSION ANALYSIS

In order to assess the relationship between state appropriation increases and increases in resident undergraduate tuition and required fees (hereinafter referred to as tuition) at public state colleges and universities, this study calculated the percent change in weighted average tuition for those institutions in 46 states (see Table 1-2) for the period 1977 to 1988. Tuition and fee data were collected by the Washington Higher Education Coordinating Board (Johnson 1988). The study also calculated the percent change in state appropriations for each state for the period 1977 to 1988 from data collected by the Center for Higher Education at Illinois State University. These data yielded 506 separate comparisons. Treated as discrete observations, the average percent increase in tuition for the 46 states for this period was 8.89% and the standard deviation was 8.15 %. The average increase in state appropriations was 8.66% with a standard deviation of 7.30%.

Figure 1-1 displays a scattergram of the 506 observations with the percent change in resident undergraduate tuition distributed along the vertical dimension and the percent change in state appropriations distributed along the horizontal dimension. In Figure 1-1, each asterisk represents one observation. Multiple observations are represented by actual numbers. A correlation coefficient of -.25 was calculated for the observations plotted in Figure 1-1.

Table 1-1 presents the results of an ordinary least squares regression analysis performed on these 506 observations data. The information presented in Table 1-1 indicates a statistically significant negative relationship between the percent change in tuition at four-year public institutions and the percent change in state appropriations over this period.

FIGURE 1-1
REGRESSION SCATTERGRAM



Scattergram of 46 States Percent Change in Resident Undergraduate Tuition and Required Fees at Regional State Colleges and Universities and State Appropriations

Table 1-1
Regression Analysis of Percent Change in Tuition
and Percent Change in State Appropriations

Correlation	.25
R^2	.06
Regression Coefficient	-.27
Intercept	9.36 %
F-level	16.71
Significance	0.0000

On the average, the higher the increase in state appropriations in a given year, the lower was the percent increase in tuition.

While the results of the simple regression analysis suggest a negative relationship between these two measures, the unexplained variation in the percent increase in tuition after accounting for the percent increase in state appropriations is noteworthy. Ninety-four percent of the variation in percent tuition increases is left unexplained by percent increase in state appropriations. Some of this variation represents regional differences.

Census Regions

The U.S. Census Bureau divides the country into four broad regions: Northeast, North Central, South and West. Each of these regions is further subdivided into two or three subregions. Table 1-2 displays these census regions and the states that compose them.

Table 1-3 presents the summary statistics on percent tuition increases and percent appropriation increases for each of the four large census regions, and Table 1-4 presents the results of regression analyses on each region.

Table 1-4 shows that the significant negative relationship between percent changes in tuition and percent changes in state appropriations for the entire set of observations is

Table 1-2
States Assigned to U.S. Bureau of Census Regions

Northeast
- New England
  - Connecticut
  - Maine
  - Massachusetts
  - New Hampshire
  - Rhode Island
  - Vermont
- Middle Atlantic
  - New Jersey
  - New York
  - Pennsylvania

North Central
- East North Central
  - Illinois
  - Indiana
  - Michigan
  - Ohio
  - Wisconsin
- West North Central
  - Iowa
  - Kansas
  - Minnesota
  - Missouri
  - Nebraska
  - North Dakota
  - South Dakota

South
- Atlantic
  - Delaware[1]
  - Florida
  - Georgia
  - Maryland
  - North Carolina
  - South Carolina
  - Virginia
  - West Virginia
- East South Central
  - Alabama
  - Kentucky
  - Mississippi
  - Tennessee
- West South Central
  - Arkansas
  - Louisiana
  - Oklahoma
  - Texas

West
- Mountain
  - Arizona
  - Colorado
  - Idaho
  - Montana
  - Nevada
  - New Mexico
  - Utah
  - Wyoming[1]
- Pacific
  - Alaska[1]
  - California
  - Hawaii[1]
  - Oregon
  - Washington

[1]These states were not included in the analysis because they do not have regional state colleges and universities; the schools included in the regression analysis.

not common to all four census regions. Considered as a region, the Northeast and North Central regions do not exhibit any significant relationship between the percent increase in resident undergraduate tuition and fees and state appropriations. The South and West, however, show somewhat stronger negative relationships between these two variables.

Table 1-3
Average Percent Increases in Tuition
and Fees and in State Appropriations by Census Regions

	Northeast	North Central	South	West
Tuition				
Average	8.1 %	9.0 %	8.9 %	8.4 %
Std. Dev.	7.37	5.8	7.9	6.8
Observations	99	132	165	110
Appropriations				
Average	9.9	7.3	9.2	9.5
Std. Dev.	8.0	5.9	8.0	11.1
Observations	99	132	165	110

Table 1-4
Regression Results by Census Region

	Northeast	North Central	South	West
Correlation	.125	.117	.326	.312
R^2	.016	.014	.106	.097
Regression Coeff.	-.113	-.115	-.323	-.509
Intercept	9.194	9.865	11.857	13.741
F-level	1.545	1.792	19.40	11.61
Significance	0.217	0.183	0.000	0.001

State Results

Disaggregating the data by census region, however, masks individual differences among states. Table 1-5 presents the regression results for the 46 states included in the analyses. While the lower number of observations in each state allows for fewer statistically

significant results, it is noteworthy that negative relationships between the increases in tuition and the increases in state appropriations were found in the majority of states. New York is the only state that exhibited a statistically significant positive relationship between increases in tuition and increases in state appropriations for this period.

To truly understand these relationships requires understanding the individual policies and the annual budget decision processes in each state for each of these years. Taken as a whole, however, these data suggest that during the last ten years, institutions in many states increased tuition when appropriation increases were lower and instituted smaller tuition increases when appropriations were higher.

TABLE 1-5

Descriptive Statistics and Regression Results by State

State	Mean Tuition Increase	Mean Appropriation Increase	R	R-Square	Regression Coefficient	Intercept	F-Level	Significance
Alabama	8.41 %	8.16 %	0.744	0.533	-0.315	11.093	11.1711	0.0086
Arizona	10.75	9.47	0.251	0.063	0.336	7.567	0.6051	0.4566
Arkansas	9.70	8.86	0.451	0.204	-0.395	13.201	2.3025	0.1635
California	15.06	9.38	0.805	0.647	-2.105	34.807	16.5417	0.0028
Colorado	8.86	7.22	0.430	0.185	0.418	5.839	2.0420	0.1868
Connecticut	6.53	10.21	0.400	0.160	-0.173	8.297	1.7114	0.2233
Florida	1.75	11.01	0.283	0.080	0.330	-1.888	0.7860	0.3984
Georgia	9.11	10.08	0.575	0.331	-0.789	17.070	4.4448	0.0642
Idaho	10.23	6.70	0.403	0.163	-0.994	16.897	1.7499	0.2185
Illinois	9.82	6.16	0.175	0.031	0.177	8.730	0.2857	0.6059
Indiana	8.53	7.66	0.002	0.000	-0.001	8.538	0.0000	0.9945
Iowa	8.66	7.13	0.171	0.029	-0.162	9.813	0.2722	0.6145
Kansas	7.05	9.19	0.250	0.063	-0.358	11.711	0.6007	0.4582
Kentucky	9.64	8.68	0.628	0.395	-0.340	12.588	5.8652	0.0385
Louisiana	11.44	8.59	0.143	0.020	-0.144	12.679	0.1878	0.6749
Maine	8.45	11.62	0.610	0.372	-0.943	19.402	5.3238	0.0464
Maryland	8.95	8.80	0.098	0.010	0.098	8.084	0.0878	0.7737
Massachusetts	7.73	13.17	0.315	0.099	-0.292	11.571	0.9908	0.3455
Michigan	8.02	7.56	0.640	0.410	-0.843	14.390	6.2454	0.0339
Minnesota	10.66	8.85	0.082	0.007	-0.093	11.482	0.0609	0.8107
Mississippi	10.15	8.42	0.826	0.682	-0.794	16.841	19.2899	0.0017
Missouri	12.64	7.38	0.521	0.272	-0.509	16.395	3.3563	0.1002
Montana	8.53	7.70	0.129	0.017	-0.118	9.436	0.1529	0.7064
Nebraska	5.89	6.68	0.396	0.157	0.404	4.443	1.6734	0.2280
Nevada	6.11	9.38	0.471	0.221	-0.985	15.352	2.5605	0.1440
New Hampshire	8.47	10.67	0.180	0.032	0.145	6.925	0.3016	0.5963
New Jersey	7.93	13.58	0.199	0.040	-0.540	8.667	0.3727	0.5567
New Mexico	10.31	10.54	0.361	0.131	-0.650	17.167	1.3529	0.2747
New York	5.35	8.10	0.826	0.683	2.768	-17.064	19.3677	0.0017
North Carolina	5.20	11.03	0.509	0.259	0.589	-1.301	3.1390	0.1102
North Dakota	9.35	8.77	0.245	0.060	0.211	7.504	0.5743	0.4680
Ohio	8.45	9.04	0.646	0.418	-0.573	13.629	6.4532	0.0317
Oklahoma	6.43	9.43	0.285	0.081	-0.174	8.069	0.7978	0.3950
Oregon	7.62	6.75	0.356	0.127	-0.307	9.689	1.3083	0.2822
Pennsylvania	8.14	5.43	0.175	0.031	-0.470	10.699	0.2839	0.6071
Rhode Island	7.83	7.62	0.165	0.027	-0.282	9.976	0.2504	0.6288
South Carolina	11.57	8.73	0.405	0.164	-0.519	16.102	1.7650	0.2167
South Dakota	8.37	6.05	0.233	0.054	-0.155	9.313	0.5148	0.4913
Tennessee	8.36	10.21	0.193	0.037	0.171	6.611	0.3468	0.5704
Texas	10.46	8.94	0.443	0.196	-0.640	16.185	2.1924	0.1728
Utah	8.01	8.93	0.332	0.110	0.159	6.585	1.1113	0.3193
Vermont	12.27	8.80	0.485	0.235	-1.250	23.259	2.7716	0.1303
Virginia	10.83	10.40	0.531	0.282	0.280	7.911	3.5329	0.0929
Washington	9.29	7.73	0.191	0.037	-0.252	11.235	0.3421	0.5730
West Virginia	11.37	6.07	0.325	0.106	-0.743	15.879	1.0659	0.3288
Wisconsin	7.73	6.24	0.235	0.055	-0.218	9.082	0.5269	0.4864

APPENDIX 2

Table 2-1
Absolute Numbers for Per Capita Disposable Income (PCDI),
the Consumer Price Index (CPI), the Higher Education Price Index (HEPI),
Public University and State College Tuition, and
Total State Appropriation

Year	PCDI	CPI	HEPI	University Tuition	State College Tuition	State Appropriations (in thousands)
1973	4466	107.7	111.2	549	466	8512
1974	4845	117.3	119.1	570	485	9830
1975	5283	130.4	129.2	593	503	10963
1976	5740	139.6	137.8	628	531	12575
1977	6258	147.7	146.8	677	561	13863
1978	6963	157.7	156.6	717	598	15436
1979	7679	172.4	168.7	757	630	16976
1980	8424	195.4	185.3	806	672	19061
1981	9240	218.0	205.2	880	720	20940
1982	9721	236.9	225.8	1017	841	22752
1983	10350	247.1	240.1	1136	942	23926
1984	11258	256.2	253.0	1274	1044	25506
1985	11876	266.2	270.1	1369	1121	28364
1986	12521	273.9	281.9	1477	1200	30730
1987	13077	280.0	293.6	1591	1290	32367
1988	13912	293.0	305.4	1701	1380	34042

Table 2-2
Cumulative Percent Increases from 1973 for
Per Capita Disposable Income (PCDI), the Consumer Price Index (CPI),
the Higher Education Price Index (HEPI),
Public University and State College Tuition, and
Total State Appropriation

Year	PCDI	CPI	HEPI	University Tuition	State College Tuition	State Appropriations
1973	0.0	0.0	0.0	0.0	0.0	0.0
1974	8.5	8.9	7.1	3.8	4.1	15.5
1975	18.3	21.1	16.2	8.0	7.9	28.8
1976	28.5	29.6	23.9	14.4	13.9	47.7
1977	40.1	37.1	32.0	23.3	20.4	62.9
1978	55.9	46.4	40.8	30.6	28.3	81.3
1979	71.9	60.1	51.7	37.9	35.2	99.4
1980	88.6	81.4	66.6	46.8	44.2	123.9
1981	106.9	102.4	84.5	60.3	54.5	146.0
1982	117.7	120.0	103.1	85.2	80.5	167.3
1983	131.8	129.4	115.9	106.9	102.1	181.1
1984	152.1	137.9	127.5	132.1	124.0	199.6
1985	165.9	147.2	142.9	149.4	140.6	233.2
1986	180.4	154.3	153.5	169.0	157.5	261.0
1987	192.8	160.0	164.0	189.8	176.8	280.3
1988	211.5	172.1	174.6	209.8	196.1	299.9

Table 2-3
Cumulative Percent Increases from 1977 for
Per Capita Disposable Income (PCDI), the Consumer Price Index (CPI),
the Higher Education Price Index (HEPI),
Public University and State College Tuition, and
Total State Appropriation

Year	PCDI	CPI	HEPI	University Tuition	State College Tuition	State Appropriations
1973	-28.6	-27.1	-24.3	-18.9	-16.9	-38.6
1974	-22.6	-20.6	-18.9	-15.8	-13.5	-29.1
1975	-15.6	-11.7	-12.0	-12.4	-10.3	-20.9
1976	-8.3	-5.5	-6.1	-7.2	-5.3	-9.3
1977	0.0	0.0	0.0	0.0	0.0	0.0
1978	11.3	6.8	6.7	5.9	6.6	11.3
1979	22.7	16.7	14.9	11.8	12.3	22.5
1980	34.6	32.3	26.2	19.1	19.8	37.5
1981	47.7	47.6	39.8	30.0	28.3	51.0
1982	55.3	60.4	53.8	50.2	49.9	64.1
1983	65.4	67.3	63.6	67.8	67.9	72.6
1984	79.9	73.5	72.3	88.2	86.1	84.0
1985	89.8	80.2	84.0	102.2	99.8	104.6
1986	100.1	85.4	92.0	118.2	113.9	121.7
1987	109.0	89.6	100.0	135.0	129.9	133.5
1988	122.3	98.4	108.0	151.3	146.0	145.6

Table 2-4
Indexed Figures From 1973 for Per Capita Disposable Income (PCDI), the Consumer Price Index (CPI), the Higher Education Price Index (HEPI), Public University and State College Tuition, and Total State Appropriation

Year	PCDI	CPI	HEPI	University Tuition	State College Tuition	State Appropriations
1973	100.0	100.0	100.0	100.0	100.0	100.0
1974	108.5	108.9	107.1	103.8	104.1	115.5
1975	118.3	121.1	116.2	108.0	107.9	128.8
1976	128.5	129.6	123.9	114.4	113.9	147.7
1977	140.1	137.1	132.0	123.3	120.4	162.9
1978	155.9	146.4	140.8	130.6	128.3	181.3
1979	171.9	160.1	151.7	137.9	135.2	199.4
1980	188.6	181.4	166.6	146.8	144.2	223.9
1981	206.9	202.4	184.5	160.3	154.5	246.0
1982	217.7	220.0	203.1	185.2	180.5	267.3
1983	231.8	229.4	215.9	206.9	202.1	281.1
1984	252.1	237.9	227.5	232.1	224.0	299.6
1985	265.9	247.2	242.9	249.4	240.6	333.2
1986	280.4	254.3	253.5	269.0	257.5	361.0
1987	292.8	260.0	264.0	289.8	276.8	380.3
1988	311.5	272.1	274.6	309.8	296.1	399.9

Table 2-5
Indexed Figures From 1977 for Per Capita Disposable Income (PCDI), the Consumer Price Index (CPI), the Higher Education Price Index (HEPI), Public University and State College Tuition, and Total State Appropriation

Year	PCDI	CPI	HEPI	University Tuition	State College Tuition	State Appropriations
1973	71.4	72.9	75.7	81.1	83.1	61.4
1974	77.4	79.4	81.1	84.2	86.5	70.9
1975	84.4	88.3	88.0	87.6	89.7	79.1
1976	91.7	94.5	93.9	92.8	94.7	90.7
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	111.3	106.8	106.7	105.9	106.6	111.3
1979	122.7	116.7	114.9	111.8	112.3	122.5
1980	134.6	132.3	126.2	119.1	119.8	137.5
1981	147.7	147.6	139.8	130.0	128.3	151.0
1982	155.3	160.4	153.8	150.2	149.9	164.1
1983	165.4	167.3	163.6	167.8	167.9	172.6
1984	179.9	173.5	172.3	188.2	186.1	184.0
1985	189.8	180.2	184.0	202.2	199.8	204.6
1986	200.1	185.4	192.0	218.2	213.9	221.7
1987	209.0	189.6	200.0	235.0	229.9	233.5
1988	222.3	198.4	208.0	251.3	246.0	245.6

APPENDIX 3

Table 3-1

UNIVERSITIES RESIDENT UNDERGRADUATE TUITION AND REQUIRED FEES, BY STATE, 1972-73 TO 1987-88

state	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88
Alabama	510	510	595	595	645	645	722	765	765	994	1074	1140	1206	1254	1304	1372
Alaska	402	472	472	472	472	512	512	522	492	492	600	700	950	1092	1200	1290
Arizona	411	411	411	450	450	450	550	550	600	650	710	850	950	990	1136	1196
Arkansas	400	400	400	400	400	460	460	460	600	720	720	900	930	930	1030	1230
California	644	644	644	648	648	710	731	731	767	956	1178	1361	1346	1346	1347	1473
Colorado	576	593	638	711	756	800	845	892	995	1111	1221	1316	1453	1617	1779	1861
Connecticut	655	715	715	799	960	960	960	1068	1068	1101	1225	1467	1657	1801	1941	2133
Delaware	475	585	720	795	970	1000	900	900	990	1160	1367	1590	1799	2100	2205	2501
Florida*	570	570	615	683	709	709	709	709	709	758	795	798	743	775	812	852
Georgia	519	538	543	615	666	702	702	731	908	954	1107	1150	1407	1554	1662	1770
Hawaii	233	223	350	478	478	478	478	478	480	480	480	710	910	910	1000	1090
Idaho	356	380	380	400	430	434	438	474	490	701	816	816	970	1010	1040	1042
Illinois	606	606	690	700	712	814	846	878	956	1109	1302	1631	1855	1967	2083	2215
Indiana	650	682	722	722	722	810	878	938	1005	1195	1328	1410	1534	1660	1760	1857
Iowa	620	620	620	682	682	750	750	830	830	950	1040	1104	1242	1304	1390	1564
Kansas	486	544	573	576	578	648	718	716	771	918	904	1068	1148	1230	1290	1325
Kentucky	405	480	480	480	480	550	550	574	674	730	846	1010	1124	1228	1332	1412
Louisiana	320	320	320	330	440	440	552	553	568	664	798	968	974	1274	1724	1724
Maine	562	562	587	595	695	805	920	940	1110	1290	1440	1545	1545	1550	1565	1846
Maryland	639	698	698	718	788	784	750	842	884	1073	1185	1332	1410	1496	1601	1740
Massachusetts	469	519	549	591	594	770	829	952	1117	1326	1545	1684	1684	1955	2046	2006
Michigan*	696	852	855	904	906	1078	1244	1373	1561	1861	2144	2261	2350	2359	2695	2828
Minnesota*	641	683	714	752	819	927	994	1060	1258	1406	1608	1792	1992	2109	2205	2331
Mississippi	516	516	530	603	703	703	707	879	954	1054	1167	1321	1401	1517	1727	1780
Missouri	540	540	580	580	644	644	722	768	822	918	1068	1259	1411	1457	1492	1663
Montana	471	487	529	539	549	613	613	625	657	747	825	870	936	1059	1227	1238
Nebraska	535	535	663	663	726	763	808	858	948	1029	1048	1211	1331	1513	1520	1565
Nevada	519	519	524	622	622	660	660	660	720	840	930	1080	1080	1080	1080	1080
New Hampshire	1033	983	983	993	1097	1098	1248	1265	1305	1832	1956	2175	2356	2500	2529	2754
New Jersey	665	725	725	725	951	963	996	1064	1199	1561	1678	1834	1878	2135	2278	2573
New Mexico	456	456	456	456	520	520	576	624	665	721	757	774	816	889	1020	1152
New York	815	825	825	825	875	892	892	935	1074	1150	1150	1452	1475	1472	1464	1474
North Carolina	422	449	453	468	478	524	529	576	599	694	702	766	773	794	820	845
North Dakota	456	456	467	528	528	545	545	645	660	764	804	1020	1080	1167	1266	1412
Ohio	750	750	780	810	835	915	975	1005	1110	1300	1450	1557	1641	1704	1704	1890
Oklahoma	445	445	445	470	538	541	541	541	613	613	722	801	858	858	921	1007
Oregon	534	540	573	648	735	740	799	860	969	1190	1380	1433	1442	1487	1487	1555
Pennsylvania	885	900	960	1084	1149	1263	1360	1485	1641	1848	2110	2312	2562	2760	2936	3292
Rhode Island	761	764	796	895	954	974	1052	1147	1181	1311	1504	1694	1847	1960	1980	2090
South Carolina	570	570	584	654	662	732	732	807	1040	1175	1190	1440	1440	1608	2028	2028
South Dakota	500	553	584	625	647	653	704	761	862	958	1066	1189	1236	1432	1542	1631
Tennessee	399	399	417	453	495	495	510	550	608	684	804	843	966	1092	1287	1368
Texas	267	322	342	354	374	378	378	420	440	452	452	462	462	635	885	876
Utah	480	480	480	525	525	545	641	690	786	876	960	1050	1167	1335	1400	1437
Vermont	1086	1068	1096	1100	1348	1348	1452	1662	1828	2081	2466	2613	2793	2948	3208	3432
Virginia	597	622	644	694	734	804	848	914	1042	1146	1350	1586	1826	2036	2230	2366
Washington	564	564	564	564	564	660	687	687	687	1059	1176	1308	1308	1605	1605	1731
West Virginia	292	310	319	373	403	403	459	482	492	628	840	1090	1160	1160	1260	1366
Wisconsin	558	600	611	630	671	734	812	877	946	984	1121	1198	1278	1390	1570	1737
Wyoming	410	410	410	411	434	434	434	434	592	592	592	616	721	721	778	778
National Average	549	570	593	628	677	717	757	806	888	1017	1136	1274	1369	1477	1591	1701
Percent Change		3.80%	3.99%	5.93%	7.83%	5.88%	5.58%	6.54%	9.20%	15.50%	11.71%	12.12%	7.45%	7.94%	7.68%	6.96%

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Table 3-1A

UNIVERSITIES RESIDENT UNDERGRADUATE TUITION AND REQUIRED FEES, BY STATE AND CENSUS REGIONS, 1972-73 TO 1987-88

State	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88
	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
Northeast																
New England																
Connecticut	655	715	715	799	960	960	960	1060	1060	1101	1225	1467	1657	1801	1941	2133
Maine	562	562	587	595	695	805	920	940	1110	1290	1490	1545	1545	1550	1565	1846
Massachusetts	469	519	549	591	594	770	829	952	1117	1326	1545	1684	1684	1955	2046	2006
New Hampshire	1033	983	983	993	1097	1098	1248	1265	1305	1832	1956	2175	2356	2500	2529	2754
Rhode Island	761	764	796	895	954	974	1052	1147	1181	1311	1504	1694	1847	1960	1980	2090
Vermont	1086	1088	1096	1100	1340	1340	1452	1662	1828	2081	2466	2613	2793	2948	3208	3432
New England Avg.	761	772	788	829	941	991	1078	1172	1268	1490	1689	1863	1980	2119	2212	2377
Middle Atlantic																
New Jersey	665	725	725	725	951	963	996	1064	1199	1561	1678	1834	1878	2155	2278	2573
New York (1)	815	825	825	825	875	892	892	995	1074	1150	1150	1452	1475	1472	1464	1474
Pennsylvania	885	900	960	1084	1149	1263	1368	1485	1641	1848	2118	2312	2562	2760	2996	3292
Middle Atlantic Avg.	788	817	837	878	992	1039	1085	1181	1305	1520	1649	1866	1972	2129	2246	2446
Northeast Avg.	778	787	804	845	958	1009	1081	1175	1280	1500	1676	1864	1977	2122	2223	2400
Annual Percent Change	0.00%	2.16%	2.19%	5.13%	13.36%	5.31%	7.09%	8.77%	8.93%	17.16%	11.72%	11.23%	6.09%	7.33%	4.74%	7.96%
% Change Over 1978-79							0.00%	8.77%	18.49%	38.62%	55.08%	72.50%	83.00%	96.41%	105.73%	122.11%
% Change Over 1972-73	0.00%	2.16%	4.40%	9.75%	24.41%	31.02%	40.31%	52.62%	66.25%	94.78%	117.68%	142.04%	156.77%	175.59%	188.66%	211.64%
North Central																
East North Central																
Illinois	606	606	650	700	712	814	846	870	956	1109	1302	1651	1855	1967	2083	2215
Indiana	650	682	722	722	722	810	870	930	1005	1155	1320	1410	1534	1660	1760	1857
Michigan (2)	696	852	855	904	986	1078	1244	1373	1561	1861	2144	2261	2350	2359	2695	2828
Ohio	750	750	780	810	835	915	975	1005	1110	1360	1458	1557	1641	1704	1704	1890
Wisconsin	558	600	611	630	671	734	812	877	946	984	1121	1198	1278	1390	1578	1737
East North Central Avg.	660	714	732	753	785	870	949	1014	1116	1298	1471	1617	1732	1816	1962	2105
West North Central																
Iowa	620	620	620	682	682	750	750	830	830	950	1040	1104	1242	1304	1390	1564
Kansas	486	544	573	576	578	688	718	716	771	918	984	1068	1148	1230	1290	1325
Minnesota (2)	641	683	714	752	819	927	994	1060	1250	1406	1608	1792	1932	2109	2205	2331
Missouri	540	540	580	580	644	644	722	760	822	918	1068	1299	1411	1457	1492	1669
Nebraska	535	535	663	663	726	763	808	858	940	1029	1048	1211	1331	1513	1520	1565
North Dakota	456	456	467	528	528	545	545	645	660	764	804	1020	1080	1167	1266	1412
South Dakota	500	553	584	625	647	653	704	761	862	958	1066	1189	1236	1432	1542	1631
West North Central Avg.	540	562	600	629	661	710	748	805	876	992	1077	1240	1349	1459	1529	1642
North Central Avg.	593	625	655	681	713	777	832	892	976	1119	1241	1397	1508	1608	1710	1835
Annual Percent Change	0.00%	5.38%	4.77%	3.96%	4.63%	9.02%	7.07%	7.30%	9.30%	14.68%	10.86%	12.60%	7.93%	6.60%	6.35%	7.35%
% Change Over 1978-79							0.00%	7.30%	17.36%	34.59%	49.21%	68.02%	81.34%	93.31%	105.58%	120.68%
% Change Over 1972-73	0.00%	5.38%	10.41%	14.81%	20.12%	30.95%	40.21%	50.45%	64.55%	88.70%	109.20%	135.57%	154.26%	171.03%	188.24%	209.41%

South																
South Atlantic																
Delaware (1)	475	585	720	795	970	1008	908	908	998	1160	1367	1590	1799	2100	2205	2501
Florida (1) (2)	570	570	615	683	709	709	709	709	709	758	795	798	743	775	812	852
Georgia	519	538	543	615	666	702	702	731	908	951	1107	1190	1407	1554	1662	1778
Maryland	639	698	698	718	780	784	790	842	884	1073	1185	1332	1410	1496	1601	1740
North Carolina	422	449	453	468	478	524	529	576	599	694	702	766	773	791	820	845
South Carolina	570	570	584	654	662	732	732	807	1040	1175	1190	1440	1440	1608	2020	2020
Virginia	597	622	644	694	734	804	849	914	1042	1146	1350	1586	1826	2036	2238	2366
West Virginia	292	310	319	373	403	405	459	482	492	628	840	1090	1160	1160	1260	1366
South Atlantic Avg.	511	543	572	625	676	708	720	756	834	949	1067	1224	1320	1490	1578	1684
East South Central																
Alabama	510	510	595	595	645	645	722	765	765	994	1074	1140	1206	1254	1304	1572
Kentucky	405	480	480	480	480	550	550	574	674	730	846	1018	1124	1220	1332	1412
Mississippi	516	516	530	603	703	705	707	879	954	1054	1167	1321	1401	1517	1727	1780
Tennessee	399	399	417	453	495	495	510	550	600	684	804	843	966	1092	1207	1368
East South Central Avg.	458	476	506	533	581	598	622	694	748	866	973	1083	1174	1273	1413	1533
West South Central																
Arkansas	400	400	400	400	400	460	460	460	600	720	720	900	930	930	1030	1230
Louisiana	320	320	320	330	440	440	552	553	568	664	798	968	974	1274	1724	1724
Oklahoma	445	445	445	478	538	541	541	541	613	613	722	801	858	858	921	1087
Texas	267	322	342	354	374	378	378	428	448	452	452	462	462	655	885	876
West South Central Avg.	358	372	377	389	438	455	483	494	555	612	673	783	806	929	1140	1229
South Avg.	459	483	507	543	593	617	636	675	743	844	945	1078	1155	1271	1427	1532
Annual Percent Change	0.00%	5.20%	4.80%	7.16%	9.21%	4.14%	3.04%	6.10%	10.07%	13.57%	12.00%	14.11%	7.11%	10.02%	12.32%	7.36%
% Change Over 1970-79							0.00%	6.10%	16.78%	32.63%	48.55%	69.51%	81.56%	99.75%	124.37%	140.08%
% Change Over 1972-73	0.00%	5.20%	10.33%	18.23%	29.12%	34.47%	38.55%	47.01%	61.00%	83.75%	105.01%	134.86%	151.55%	176.76%	210.86%	233.75%
West																
Mountain																
Arizona	411	411	411	450	450	450	550	550	600	650	710	850	950	990	1136	1196
Colorado	576	593	638	711	756	800	845	852	995	1111	1221	1316	1453	1617	1779	1861
Idaho	356	380	380	400	430	434	438	474	498	701	816	816	970	1010	1040	1042
Montana	471	487	529	539	549	613	613	625	657	747	825	870	936	1059	1227	1238
Nevada	519	519	524	622	622	660	660	660	720	840	930	1080	1080	1080	1080	1080
New Mexico	456	456	456	456	520	520	576	624	645	721	757	774	816	889	1020	1152
Utah	480	480	480	525	525	545	641	698	786	876	960	1050	1167	1335	1490	1497
Wyoming	410	410	410	411	434	434	434	434	592	592	592	616	721	721	778	778
Mountain Avg.	460	467	479	514	536	537	595	619	688	780	851	922	1012	1088	1194	1223
Pacific																
Alaska	402	472	472	472	472	512	512	522	492	492	648	708	958	1092	1288	1298
California (1)	644	644	644	648	648	718	731	731	767	956	1175	1361	1346	1346	1347	1473
Hawaii	233	223	358	478	478	478	478	478	488	488	488	718	918	918	1008	1058
Oregon	534	548	573	648	739	748	789	868	969	1158	1388	1433	1442	1487	1487	1555
Washington	564	564	564	564	564	668	687	687	687	1059	1176	1308	1308	1605	1605	1731
Pacific Avg.	475	489	521	562	580	620	639	656	679	835	980	1104	1193	1288	1344	1429
West Avg.	466	475	495	533	553	581	612	633	685	801	901	992	1081	1165	1251	1302
Annual Percent Change	0.00%	2.03%	4.08%	7.67%	3.80%	5.13%	5.27%	3.43%	8.18%	17.02%	12.43%	10.09%	9.04%	7.71%	7.45%	4.07%
% Change Over 1970-79							0.00%	3.43%	11.09%	30.94%	47.22%	62.08%	76.73%	90.36%	104.54%	112.06%
% Change Over 1972-73	0.00%	2.03%	6.19%	14.33%	18.68%	24.77%	31.34%	35.85%	46.96%	71.98%	93.36%	112.88%	132.12%	150.02%	168.64%	179.57%
National Average	549	570	593	628	677	717	757	806	880	1017	1136	1274	1369	1477	1591	1701
Percent Change	0.00%	3.80%	3.99%	5.93%	7.83%	5.88%	5.56%	6.54%	9.20%	15.50%	11.71%	12.12%	7.45%	7.94%	7.68%	6.96%
% Chg. Over 1970-79							0.00%	6.54%	16.35%	34.38%	50.12%	68.32%	80.06%	95.22%	110.21%	124.84%
% Change Over 1972-73	0.00%	3.80%	7.94%	14.34%	23.29%	30.55%	37.83%	46.85%	60.37%	85.22%	106.92%	132.01%	149.20%	169.00%	189.75%	209.90%

Table 3-2

COLLEGES AND STATE UNIVERSITIES RESIDENT UNDERGRADUATE TUITION AND REQUIRED FEES, BY STATE, 1972-73 TO 1987-88

STATE	INST.	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88
Alabama	5	433	451	464	479	532	536	562	650	697	816	922	1034	1075	1112	1210	1276
Alaska	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arizona	1	304	330	336	388	400	400	500	500	600	650	710	850	950	990	1136	1196
Arkansas	4	405	405	405	405	405	480	481	481	600	715	735	798	798	828	909	1003
California (1)	11	161	161	194	194	195	200	205	209	223	279	447	698	667	673	687	769
Colorado	5	392	427	457	478	502	540	580	681	698	787	892	971	1029	1111	1214	1269
Connecticut	3	515	515	576	576	648	679	695	710	736	812	906	1023	1113	1147	1241	1329
Delaware	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Florida (1) (2)	5	570	570	585	653	709	709	709	709	709	758	795	798	743	775	812	852
Georgia	0	400	409	422	476	517	529	532	560	651	696	800	912	1039	1153	1259	1335
Hawaii	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Idaho (1)	2	365	366	381	396	398	398	397	466	474	685	803	811	1009	1049	1037	1049
Illinois	5	506	573	573	579	582	678	709	745	807	955	1071	1176	1336	1424	1515	1616
Indiana	2	615	645	720	720	720	795	840	900	975	1113	1275	1364	1459	1548	1656	1764
Iowa	1	600	600	600	630	630	694	694	774	774	900	990	1050	1104	1242	1324	1548
Kansas	4	411	449	460	460	482	509	601	607	666	780	811	933	1010	1142	1202	1243
Kentucky	5	365	420	420	420	420	480	480	520	580	626	720	836	898	954	1024	1145
Louisiana	7	301	312	347	401	401	468	468	489	583	588	688	702	835	1062	1128	1309
Maine	3	496	496	540	620	645	789	919	950	963	1203	1360	1453	1453	1453	1463	1520
Maryland	6	427	566	611	646	699	771	787	829	947	1103	1218	1347	1413	1563	1660	1780
Massachusetts	0	317	368	368	502	589	632	641	661	778	916	1065	1001	1188	1259	1266	1310
Michigan	6	525	545	599	624	727	781	834	901	1018	1225	1359	1474	1538	1540	1557	1675
Minnesota	6	453	458	458	519	545	596	608	648	714	776	974	1216	1402	1519	1583	1617
Mississippi	5	436	439	442	472	564	564	599	729	765	830	873	932	1043	1180	1519	1595
Missouri (1)	5	307	307	325	327	337	361	396	394	420	548	648	760	848	958	1066	1218
Montana	2	439	442	467	471	476	497	497	497	533	602	656	751	810	944	1146	1146
Nebraska	2	424	530	545	558	557	559	607	637	674	758	748	841	958	1006	1091	1145
Nevada	1	532	532	532	548	582	720	720	720	720	840	938	1080	1080	1080	1080	1080
New Hampshire	2	720	720	720	736	830	851	967	986	1082	1399	1498	1580	1720	1826	1909	2000
New Jersey	7	637	637	667	667	819	858	858	891	976	1077	1239	1396	1458	1591	1742	1881
New Mexico	1	333	333	333	333	343	343	356	402	429	511	531	531	600	600	839	958
New York (1)	10	765	777	820	820	861	867	895	987	998	1138	1138	1452	1475	1472	1437	1478
North Carolina	5	456	473	488	488	488	523	534	545	568	649	662	715	736	759	797	847
North Dakota	4	400	405	421	470	473	482	483	549	593	699	699	862	913	1031	1125	1226
Ohio	4	754	761	761	788	823	889	930	994	1081	1300	1468	1614	1689	1756	1826	1909
Oklahoma	6	340	343	346	346	407	407	407	408	454	454	520	556	601	604	652	790
Oregon	4	518	556	589	650	695	728	767	849	933	1186	1351	1392	1408	1458	1468	1521
Pennsylvania	11	722	772	823	884	884	965	1049	1051	1216	1267	1627	1642	1736	1793	1882	2039
Rhode Island	1	490	490	511	605	610	625	674	730	782	854	930	1070	1162	1234	1298	1352
South Carolina	1	410	410	410	410	410	460	500	550	620	680	860	940	1020	1100	1340	1340
South Dakota	3	460	522	543	592	623	628	693	726	829	905	993	1110	1217	1324	1447	1493
Tennessee	6	365	372	401	440	478	478	478	510	533	663	740	740	833	911	1054	1129
Texas	9	258	286	299	327	327	348	348	373	394	397	397	477	477	741	886	886
Utah	1	405	405	432	465	471	522	558	588	633	705	762	810	876	951	1069	1095
Vermont (1)	2	842	842	723	723	723	723	825	1143	1208	1451	1633	1841	2025	2164	2354	2482
Virginia	5	544	575	617	703	720	796	896	903	1009	1153	1327	1504	1731	1877	2077	2215
Washington	4	495	495	507	507	507	591	618	618	618	867	942	1017	1017	1212	1212	1272
West Virginia	7	255	262	266	313	321	327	359	365	376	460	597	765	817	863	924	1008
Wisconsin	4	533	589	616	654	692	719	761	822	888	920	1041	1104	1206	1304	1437	1564
Wyoming	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
National Average		466	485	503	531	561	590	630	672	728	841	942	1044	1121	1200	1290	1380
Percent Change			4.08%	3.76%	5.70%	5.49%	6.71%	5.27%	6.77%	8.28%	15.53%	11.94%	10.87%	7.40%	7.03%	7.47%	7.00%

Table 3-2A

COLLEGES AND STATE UNIVERSITIES RESIDENT UNDERGRADUATE TUITION AND REQUIRED FEES, BY STATE AND CENSUS REGIONS, 1972-73 TO 1987-88

State	INST.	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88
		72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
Northeast																	
New England																	
Connecticut	3	515	515	576	576	648	679	695	710	736	812	906	1023	1113	1147	1241	1329
Maine	3	446	446	540	620	645	789	919	950	963	1203	1360	1453	1453	1453	1463	1520
Massachusetts	8	317	368	368	502	589	632	641	661	770	916	1065	1001	1108	1259	1266	1310
New Hampshire	2	720	720	720	736	838	851	967	986	1082	1399	1448	1500	1720	1826	1909	2000
Rhode Island	1	490	490	511	605	610	625	674	730	782	854	938	1070	1162	1234	1298	1352
Vermont (1)	2	842	842	723	723	723	723	825	1143	1200	1451	1639	1841	2025	2164	2354	2482
New England Avg.		555	564	574	628	679	717	787	863	922	1106	1226	1343	1441	1514	1589	1672
Middle Atlantic																	
New Jersey	7	637	637	667	667	819	858	858	891	975	1077	1239	1396	1458	1591	1742	1801
New York (1)	10	765	777	820	820	861	867	895	907	998	1138	1138	1452	1475	1472	1437	1478
Pennsylvania	11	722	772	823	884	884	965	1049	1051	1216	1267	1627	1642	1736	1793	1882	2039
Middle Atlantic Avg.		708	729	770	790	855	897	934	976	1063	1161	1335	1497	1554	1619	1687	1799
Northeast Average		606	619	640	682	737	777	836	901	969	1124	1262	1394	1480	1549	1621	1715
Annual Percent Change		0.00%	2.07%	3.40%	6.65%	8.08%	5.30%	7.64%	7.79%	7.57%	15.98%	12.29%	10.44%	6.19%	4.63%	4.68%	5.75%
% Chg. Over 1978-79								0.00%	7.79%	15.95%	34.48%	51.00%	66.77%	77.08%	85.25%	93.97%	105.12%
% Chg. Over 1972-73		0.00%	2.07%	5.54%	12.60%	21.69%	28.14%	37.94%	48.68%	59.94%	85.50%	108.25%	130.03%	144.26%	155.57%	167.35%	182.93%
North Central																	
East North Central																	
Illinois	5	586	573	573	579	582	678	794	745	807	955	1074	1176	1336	1424	1515	1616
Indiana	2	615	645	720	720	720	795	840	900	975	1113	1275	1364	1459	1540	1654	1764
Michigan	6	525	545	599	624	727	781	834	901	1010	1225	1359	1474	1538	1540	1578	1675
Ohio	4	754	761	761	788	823	889	930	994	1081	1300	1468	1614	1689	1756	1826	1909
Wisconsin	4	533	589	616	654	692	719	761	822	880	920	1041	1104	1206	1304	1437	1564
East North Central Avg.		603	623	654	673	709	772	814	872	951	1103	1243	1346	1446	1514	1602	1722
West North Central																	
Iowa	1	600	600	600	630	630	694	694	774	774	908	990	1050	1184	1242	1324	1548
Kansas	4	411	449	460	468	482	589	601	607	646	780	811	933	1010	1142	1202	1243
Minnesota	6	453	458	458	515	545	596	608	648	714	776	974	1216	1402	1519	1583	1617
Missouri (1)	5	387	387	325	327	337	361	396	394	420	548	648	760	848	958	1066	1218
Nebraska	2	424	530	545	550	557	559	607	637	674	758	748	841	958	1006	1084	1145
North Dakota	4	400	405	421	470	473	482	483	589	593	699	699	862	913	1031	1125	1226
South Dakota	3	460	522	543	592	623	628	693	726	829	905	953	1118	1217	1324	1447	1499
West North Central Avg.		436	467	479	508	521	550	583	625	647	765	830	969	1075	1175	1262	1357
North Central Average		506	532	552	577	599	648	679	729	785	906	1007	1126	1229	1316	1404	1509
Annual Percent Change		0.00%	5.21%	3.71%	4.53%	3.90%	8.07%	4.89%	7.19%	7.85%	15.37%	11.12%	11.85%	9.18%	7.06%	6.64%	7.49%
% Chg. Over 1978-79								0.00%	7.19%	15.61%	33.37%	48.20%	65.77%	80.98%	93.77%	106.64%	122.11%
% Chg. Over 1972-73		0.00%	5.21%	9.11%	14.06%	18.51%	28.07%	34.33%	43.98%	55.25%	79.15%	99.08%	122.68%	143.11%	160.28%	177.57%	198.35%

South																	
South Atlantic																	
Delaware	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Florida (1) (2)	5	570	570	585	653	709	709	709	709	709	750	795	790	743	775	812	852
Georgia	0	400	409	422	476	517	529	532	560	651	696	800	912	1039	1153	1259	1335
Maryland	6	427	566	611	646	699	771	787	829	947	1103	1218	1347	1413	1563	1660	1780
North Carolina	5	456	473	480	480	480	523	534	545	568	649	662	715	736	759	797	847
South Carolina	1	410	410	410	410	410	460	500	550	620	680	860	940	1020	1020	1100	1340
Virginia	5	544	575	617	703	720	746	856	903	1009	1153	1327	1504	1731	1877	2077	2215
West Virginia	7	255	262	266	313	321	327	359	365	376	460	597	765	817	863	924	1008
South Atlantic Avg.		437	466	486	527	552	581	611	638	697	787	894	997	1071	1144	1233	1340
East South Central																	
Alabama	5	433	451	466	479	532	556	562	650	697	816	922	1034	1075	1112	1210	1276
Kentucky	5	365	420	420	420	420	480	480	520	580	626	720	836	890	954	1024	1145
Mississippi	5	436	439	442	472	566	566	599	729	765	830	873	932	1043	1180	1519	1595
Tennessee	6	365	372	401	440	478	478	478	510	533	663	740	740	833	911	1054	1129
East South Central Avg.		400	421	432	453	499	520	530	604	644	734	814	886	962	1039	1201	1286
West South Central																	
Arkansas	4	405	405	405	405	405	480	481	481	600	715	735	790	790	820	909	1003
Louisiana	7	304	312	347	404	404	460	460	483	583	540	600	702	835	1062	1120	1309
Oklahoma	6	340	343	346	346	407	407	407	408	454	454	520	556	601	604	652	790
Texas	9	258	286	299	327	327	348	348	373	394	397	397	477	477	741	806	886
West South Central Avg.		327	337	349	371	386	424	426	436	508	539	585	633	678	809	894	1017
South Average		398	420	435	465	494	523	540	576	632	706	790	870	937	1027	1135	1239
Annual Percent Change		0.00%	5.45%	3.69%	7.00%	6.03%	5.90%	3.32%	6.63%	9.83%	11.70%	11.87%	10.14%	7.68%	9.55%	10.50%	9.23%
% Chg. Over 1970-71								0.00%	6.63%	17.11%	30.01%	46.35%	61.13%	73.57%	90.15%	110.11%	129.51%
% Chg. Over 1972-73		0.00%	5.45%	9.33%	16.95%	24.04%	31.37%	35.72%	44.72%	58.95%	77.35%	98.63%	118.77%	135.57%	158.08%	185.17%	211.45%
West																	
Mountain																	
Arizona	1	304	330	336	380	400	400	500	500	600	650	710	850	950	990	1136	1196
Colorado	1	392	427	457	478	502	540	580	601	658	787	852	971	1029	1111	1214	1269
Idaho (1)	2	365	366	381	386	388	388	397	466	474	685	803	811	1009	1049	1037	1049
Montana	2	439	442	467	471	476	497	497	497	533	602	656	751	810	944	1146	1146
Nevada	1	532	532	532	540	582	720	720	720	720	840	930	1080	1080	1080	1080	1080
New Mexico	1	333	333	333	333	343	343	356	402	429	511	531	531	600	600	726	950
Utah	1	405	405	432	465	471	522	550	580	633	705	762	810	876	951	1069	1095
Wyoming	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mountain Avg.		396	405	420	436	452	487	515	539	584	683	755	829	908	961	1058	1113
Pacific																	
Alaska	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
California (1)	11	161	161	194	194	195	200	205	209	223	279	447	590	667	673	687	769
Hawaii	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Oregon	4	510	556	589	650	695	720	767	849	933	1106	1351	1392	1400	1450	1460	1521
Washington	4	495	495	507	507	507	591	618	618	618	867	942	1017	1017	1212	1212	1272
Pacific Avg.		391	404	430	450	466	504	530	559	591	777	913	1036	1031	1114	1122	1187
West Average		394	405	423	440	456	492	520	545	586	711	802	891	945	1007	1070	1136
Annual Percent Change		0.00%	2.61%	4.47%	4.16%	3.52%	7.94%	5.63%	4.85%	7.54%	21.34%	12.82%	11.05%	6.00%	6.58%	7.02%	5.38%
% Chg. Over 1970-71								0.00%	4.85%	12.75%	36.02%	54.37%	71.43%	81.72%	93.65%	107.29%	118.45%
% Chg. Over 1972-73		0.00%	2.61%	7.20%	11.66%	15.59%	24.77%	31.00%	38.18%	48.61%	80.32%	103.45%	125.94%	139.50%	155.27%	173.20%	187.91%
National Average		466	485	503	531	561	598	630	672	728	841	942	1044	1121	1200	1290	1380
Annual Percent Change		0.00%	4.00%	3.76%	5.70%	5.49%	6.71%	5.27%	6.77%	8.28%	15.53%	11.94%	10.87%	7.40%	7.03%	7.47%	7.00%
% Chg. Over 1970-71								0.00%	6.77%	15.60%	33.56%	49.52%	65.76%	78.03%	90.54%	104.78%	119.11%
% Chg. Over 1972-73		0.00%	4.00%	7.91%	14.06%	20.32%	28.40%	35.17%	44.32%	56.26%	80.54%	102.10%	124.06%	140.64%	157.55%	176.79%	196.16%

Table 3-3

COMMUNITY COLLEGES RESIDENT UNDERGRADUATE TUITION AND REQUIRED FEES, BY STATE, 1978-79 TO 1987-88

State	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88
Alabama	203	300	300	375	375	450	450	450	600	600
Alaska (1)	320	360	410	410	634	634	626	636	693	766
Arizona	146	152	224	244	298	355	385	420	428	445
Arkansas (1)	266	304	415	495	495	545	545	502	564	607
California (2)	0	0	0	0	0	30	100	100	100	100
Colorado	360	389	567	631	631	631	662	778	778	778
Connecticut	354	354	354	404	434	500	560	604	632	700
Delaware	514	514	519	576	591	591	627	684	699	771
Florida	375	405	445	462	506	540	557	560	578	578
Georgia	363	378	441	468	534	612	702	846	909	897
Hawaii	90	90	90	90	90	170	240	240	288	325
Idaho	370	370	400	530	565	605	682	728	737	747
Illinois	399	417	442	491	549	635	681	715	758	815
Indiana	870	750	810	910	1010	1074	1144	1200	1270	1343
Iowa	471	471	509	592	639	699	816	860	913	937
Kansas	450	450	450	450	510	540	600	630	675	700
Kentucky	390	390	390	390	390	414	468	520	540	560
Louisiana	340	340	350	350	460	460	540	590	630	830
Maine	423	426	561	599	620	723	817	925	800	800
Maryland	400	420	480	540	643	690	745	813	910	1020
Massachusetts	350	456	520	634	720	784	836	867	883	936
Michigan	464	502	534	624	740	750	750	796	816	857
Minnesota	540	574	638	675	821	1013	1103	1170	1193	1238
Mississippi	280	284	328	378	400	420	470	484	560	616
Missouri	321	321	333	381	422	431	483	489	527	572
Montana	285	311	311	368	363	381	432	479	479	479
Nebraska	372	446	471	492	527	580	627	638	680	735
Nevada	390	390	390	480	510	619	619	619	619	626
New Hampshire (2)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
New Jersey	534	544	597	652	662	773	818	852	924	993
New Mexico	180	312	348	345	345	349	352	352	413	447
New York	722	800	875	930	1075	1107	1190	1196	1225	1389
North Carolina	117	117	117	117	117	174	174	174	217	225
North Dakota	541	590	700	700	826	850	880	1010	1108	1208
Ohio	495	520	655	825	868	923	998	1057	1090	1190
Oklahoma	290	295	319	319	362	401	433	456	501	602
Oregon	381	429	445	508	540	594	600	625	660	684
Pennsylvania	593	659	724	827	880	937	937	1041	1105	1182
Rhode Island	416	444	494	590	630	690	740	790	844	900
South Carolina (2)	N/A	N/A	N/A	N/A	470	508	518	527	564	593
South Dakota (2)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tennessee	252	270	324	420	462	462	516	570	636	681
Texas (2)	N/A	120	250	260	270	320	320	533	561	581
Utah	482	490	555	615	640	697	740	815	912	968
Vermont	400	500	620	760	828	910	1030	1102	1440	1304
Virginia (1)	300	300	342	384	558	608	686	799	765	763
Washington	306	306	306	471	519	581	581	699	699	759
West Virginia	284	284	288	380	440	520	520	552	600	650
Wisconsin	678	746	794	839	927	950	984	1146	1278	1393
Wyoming	330	296	315	349	349	405	405	408	506	547
National Average	387	404	451	507	558	597	639	689	736	780
Percent Change		4.45%	11.64%	12.43%	10.10%	6.83%	7.17%	7.71%	6.81%	6.06%

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Table 3-3A

COMMUNITY COLLEGES RESIDENT UNDERGRADUATE TUITION AND REQUIRED FEES, BY STATE AND CENSUS REGIONS, 1978-79 TO 1987-88

State	1978-79 78	1979-80 79	1980-81 80	1981-82 81	1982-83 82	1983-84 83	1984-85 84	1985-86 85	1986-87 86	1987-88 87
Northeast										
New England										
Connecticut	354	354	354	404	434	500	560	604	632	708
Maine	423	426	561	599	620	723	817	925	800	800
Massachusetts	350	456	520	634	720	784	836	867	883	936
New Hampshire (2)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rhode Island	416	444	494	590	630	690	740	790	844	900
Vermont	400	500	620	760	828	910	1030	1102	1440	1304
New England Avg.	389	436	510	597	646	721	797	858	920	930
Middle Atlantic										
New Jersey	534	544	597	652	662	773	818	852	924	993
New York	722	800	875	930	1075	1107	1190	1196	1225	1389
Pennsylvania	593	659	724	827	880	937	937	1041	1105	1182
Middle Atlantic Avg.	616	668	732	803	872	939	982	1030	1085	1188
Northeast Average	474	523	593	675	731	803	866	922	982	1027
Annual Percent Change	0.00%	10.31%	13.44%	13.72%	8.40%	9.83%	7.85%	6.48%	6.45%	4.57%
% Chg. Over 1978-79	0.00%	10.31%	25.13%	42.30%	54.25%	69.41%	82.70%	94.54%	107.09%	116.56%
North Central										
East North Central										
Illinois	399	417	442	491	549	635	691	715	758	815
Indiana	870	750	810	910	1010	1074	1144	1200	1270	1343
Michigan	464	502	534	624	740	750	750	796	816	857
Ohio	495	520	655	825	868	923	998	1057	1090	1190
Wisconsin	678	746	794	839	927	950	984	1146	1278	1393
East North Central Avg.	581	587	647	738	819	866	911	983	1042	1120
West North Central										
Iowa	471	471	509	592	639	699	816	860	913	937
Kansas	450	450	450	450	510	540	600	630	675	700
Minnesota	540	574	638	675	821	1013	1103	1170	1193	1238
Missouri	321	321	333	381	422	431	483	489	527	572
Nebraska	372	446	471	492	527	580	627	638	680	735
North Dakota	541	590	700	700	826	850	880	1018	1108	1208
South Dakota (2)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
West North Central Avg.	449	475	517	548	624	686	752	801	849	898
North Central Average	509	526	576	634	713	768	824	884	937	999
Annual Percent Change	0.00%	3.32%	9.49%	10.15%	12.32%	7.73%	7.35%	7.20%	6.06%	6.60%
% Chg. Over 1978-79	0.00%	3.32%	13.12%	24.60%	39.96%	50.78%	61.86%	73.52%	84.04%	96.18%

South										
South Atlantic										
Delaware	514	514	519	576	591	591	627	684	699	771
Florida	375	405	445	462	506	540	557	560	578	578
Georgia	363	378	441	468	534	612	702	846	909	897
Mississippi	280	284	328	378	400	420	470	484	560	1020
North Carolina	117	117	117	117	117	174	174	174	217	225
South Carolina (2)	N/A	N/A	N/A	N/A	470	508	518	527	564	593
Virginia (1)	300	300	342	384	558	608	686	799	765	763
West Virginia	284	284	288	380	440	520	520	552	600	650
South Atlantic Avg.	319	326	354	395	452	497	532	570	612	687
East South Central										
Alabama	203	300	300	375	375	450	450	450	600	600
Kentucky	390	390	390	390	390	414	468	520	540	560
Mississippi	280	284	328	378	400	420	470	484	560	616
Tennessee	252	270	324	420	462	462	516	570	636	681
East South Central Avg.	281	311	336	391	407	437	476	506	584	614
West South Central										
Arkansas (1)	266	304	415	495	495	545	545	502	564	607
Louisiana	340	340	350	350	460	460	540	590	630	830
Oklahoma	290	295	319	319	362	401	433	456	501	602
Texas (2)	N/A	120	250	260	270	320	320	533	561	581
West South Central Avg.	299	265	334	356	397	432	460	520	564	655
South Average	304	306	344	383	427	465	500	546	593	661
Annual Percent Change	0.00%	0.60%	12.45%	11.56%	11.32%	9.00%	7.40%	9.19%	8.62%	11.49%
% Chg. Over 1978-79	0.00%	0.60%	13.12%	26.20%	40.49%	53.14%	64.47%	79.59%	95.08%	117.50%
West										
Mountain										
Arizona	146	152	224	244	290	355	385	420	420	445
Colorado	360	389	567	631	631	631	662	778	778	778
Idaho	370	370	400	530	565	605	682	728	737	747
Montana	285	311	311	368	363	381	432	479	479	479
Nevada	390	390	390	480	510	619	619	619	619	626
New Mexico	180	312	348	345	345	349	352	352	413	447
Utah	482	490	555	615	640	697	740	815	912	968
Wyoming	330	296	315	349	349	405	405	408	506	547
Mountain Avg.	318	339	389	445	463	505	535	575	609	630
Pacific										
Alaska (1)	320	360	410	410	634	634	626	636	693	766
California (2)	0	0	0	0	0	30	100	100	100	100
Hawaii	90	90	90	90	90	170	240	240	288	325
Oregon	381	429	445	508	540	594	600	625	660	684
Washington	306	306	306	471	519	581	581	699	699	759
Pacific Avg. W/Calif.	219	237	250	296	357	402	429	460	488	527
West Average	280	300	335	388	422	465	494	531	562	590
Annual Percent Change	0.00%	7.01%	11.96%	15.59%	8.79%	10.34%	6.16%	7.39%	5.99%	4.91%
% Chg. Over 1978-79	0.00%	7.01%	19.81%	38.49%	50.66%	66.24%	76.48%	89.53%	100.88%	110.74%
National Average	387	404	451	507	558	597	639	689	736	780
Percent Change	0.00%	4.45%	11.64%	12.43%	10.10%	6.83%	7.17%	7.71%	6.81%	6.06%
% Chg. Over 1978-79	0.00%	4.45%	16.61%	31.11%	44.36%	54.22%	65.28%	78.03%	90.16%	101.67%

APPENDIX 4

Table 4-1

STATE APPROPRIATIONS FOR HIGHER EDUCATION, BY STATE, 1976-77 TO 1987-8

STATE	1976-77	77-78	78-79	79-80	80-81	81-82	82-83 (000's)	83-84 (000's)	84-85 (000's)	85-86 (000)	86-87 (000)	1987-88 (000)
Alabama	$250,454.0	$310,974.0	$374,332.0	$377,135.0	$427,199.0	$417,757.0	$407,082.0	$404,553.0	$502,134.0	$631,341.0	$556,894.0	$570,537.00
ALASKA*	$64,029.0	$68,212.0	$74,552.0	$72,492.0	$81,004.0	$122,499.0	$148,531.4	$157,042.7	$169,031.0	$235,756.0	$207,086.0	$157,156.00
ARIZONA*	$184,786.0	$207,961.0	$218,166.0	$232,787.0	$280,146.0	$291,461.0	$292,813.3	$330,192.0	$370,214.0	$432,342.0	$480,076.0	$491,911.00
ARKANSAS*	$114,936.0	$126,155.0	$140,319.0	$169,664.0	$187,367.0	$183,980.0	$185,620.0	$197,321.0	$241,730.0	$299,224.0	$273,102.0	$279,105.00
CALIFORNIA*	$1,827,549.0	$1,961,525.0	$2,333,110.0	$2,814,321.0	$3,150,885.0	$3,201,675.0	$3,145,696.0	$3,125,600.0	$3,820,897.9	$4,247,256.0	$4,562,651.0	$4,740,150.00
COLORADO*	$206,226.0	$220,909.0	$237,310.0	$246,066.0	$263,981.0	$305,791.0	$322,836.3	$366,747.0	$380,302.0	$399,140.0	$423,132.0	$441,021.00
CONNECTICUT	$145,880.0	$190,757.0	$206,901.0	$212,075.0	$250,357.0	$229,406.0	$252,600.0	$273,706.0	$302,931.0	$329,917.0	$360,648.0	$409,549.00
DELAWARE	$49,311.0	$44,190.0	$48,831.0	$53,273.0	$63,811.0	$72,125.0	$76,900.0	$77,262.0	$83,453.9	$91,411.0	$96,797.0	$101,339.00
FLORIDA	$434,857.0	$489,609.0	$535,809.0	$610,094.0	$705,489.0	$802,316.0	$905,796.0	$956,258.0	$1,026,655.0	$1,129,209.0	$1,277,704.0	$1,365,759.00
GEORGIA	$265,561.0	$302,797.0	$346,731.0	$385,132.0	$431,963.0	$498,919.0	$534,219.0	$560,077.3	$608,796.7	$670,046.0	$714,004.0	$759,404.00
HAWAII	$97,804.0	$109,642.0	$113,767.0	$119,073.0	$135,373.0	$154,755.0	$185,114.0	$181,560.0	$186,708.0	$200,636.0	$220,845.0	$254,672.00
IDAHO	$69,197.0	$77,072.0	$83,797.0	$83,600.0	$94,146.0	$92,131.6	$104,019.0	$101,062.0	$110,123.0	$119,042.0	$126,030.0	$139,136.00
ILLINOIS	$697,045.0	$779,284.0	$815,782.0	$876,951.0	$964,584.0	$1,025,211.0	$1,029,282.0	$1,113,102.0	$1,182,857.0	$1,314,353.0	$1,390,614.0	$1,331,564.00
INDIANA*	$316,000.0	$338,152.0	$384,376.0	$411,190.0	$459,639.0	$482,494.0	$536,949.0	$583,484.0	$649,810.0	$607,341.0	$660,592.0	$704,703.00
IOWA*	$210,345.0	$228,166.0	$272,725.0	$303,631.0	$332,244.0	$341,930.0	$366,950.0	$360,741.0	$392,987.0	$385,370.0	$404,610.0	$441,458.00
KANSAS*	$173,777.0	$188,869.0	$222,216.0	$238,839.0	$259,859.0	$278,662.0	$303,955.0	$306,473.0	$337,267.0	$345,173.0	$350,735.0	$363,924.00
KENTUCKY	$205,861.0	$205,861.0	$272,909.0	$299,918.0	$307,572.0	$339,600.0	$363,613.0	$400,477.0	$407,904.0	$432,627.0	$458,968.0	$499,526.00
LOUISIANA	$215,457.0	$242,469.0	$278,954.0	$330,000.0	$398,325.0	$454,754.0	$501,602.0	$494,243.7	$553,188.0	$541,680.0	$541,722.0	$514,517.00
MAINE	$42,567.0	$45,910.0	$48,966.0	$57,265.0	$62,628.0	$66,871.0	$73,196.0	$76,653.0	$91,160.0	$100,971.0	$125,216.0	$140,645.00
MARYLAND	$244,066.0	$281,230.0	$292,735.0	$323,732.0	$367,781.0	$385,949.0	$432,653.0	$437,028.0	$487,691.0	$531,986.0	$569,975.0	$614,657.00
MASSACHUSETTS	$234,292.0	$254,122.0	$273,333.0	$314,929.0	$322,198.0	$361,500.0	$412,413.0	$537,263.0	$641,846.0	$711,102.0	$816,379.0	$895,299.00
MICHIGAN	$593,930.0	$660,404.0	$733,978.0	$800,320.0	$816,400.0	$848,532.0	$865,000.0	$905,875.2	$1,000,200.0	$1,152,097.0	$1,220,559.0	$1,313,040.00
MINNESOTA*	$325,301.0	$401,352.0	$393,359.0	$460,783.0	$477,354.0	$545,503.0	$557,212.0	$610,889.0	$649,604.0	$699,504.0	$747,187.0	$809,963.00
MISSISSIPPI	$154,036.0	$186,668.0	$210,950.0	$233,730.0	$261,262.0	$284,322.0	$296,351.0	$333,720.6	$342,906.0	$373,687.0	$327,353.0	$362,036.00
MISSOURI	$236,782.0	$259,359.0	$284,836.0	$312,941.0	$353,252.0	$323,868.0	$350,090.0	$365,931.7	$385,029.0	$476,420.0	$476,420.0	$503,189.00
MONTANA	$47,705.0	$52,251.0	$55,850.0	$60,194.0	$66,383.0	$83,693.0	$95,273.0	$103,617.0	$107,362.0	$106,150.0	$103,167.0	$105,106.00
NEBRASKA	$122,198.0	$131,200.0	$140,539.0	$150,940.0	$166,155.0	$189,189.0	$189,610.0	$195,633.4	$213,337.2	$210,500.0	$217,355.0	$227,203.00
NEVADA	$42,355.0	$45,457.0	$50,112.0	$56,096.0	$62,107.0	$65,051.0	$71,929.0	$75,360.0	$78,897.0	$94,400.0	$102,419.0	$112,730.00
NEW HAMPSHIRE	$22,859.0	$27,519.0	$27,542.0	$29,006.0	$32,919.0	$39,323.0	$35,246.0	$41,141.0	$42,630.0	$50,265.0	$55,961.0	$66,901.00
NEW JERSEY*	$274,405.0	$403,566.0	$370,637.0	$400,366.0	$434,222.0	$464,787.0	$496,314.0	$531,091.0	$753,883.0	$846,326.0	$890,577.0	$1,013,299.00
NEW MEXICO	$82,047.0	$95,756.0	$114,458.0	$125,731.0	$143,316.0	$171,876.0	$184,084.0	$195,494.0	$220,855.0	$234,095.0	$233,552.0	$242,798.00
NEW YORK	$1,251,096.0	$1,238,754.0	$1,421,407.0	$1,543,416.0	$1,664,361.0	$1,855,429.0	$2,010,081.0	$2,273,527.0	$2,414,410.0	$2,545,546.0	$2,720,779.0	$2,936,954.00
NORTH CAROLINA	$407,977.0	$466,208.0	$521,863.0	$580,189.0	$660,645.0	$758,166.0	$793,433.0	$888,022.3	$1,004,122.0	$1,078,822.0	$1,172,120.0	$1,284,076.00
NORTH DAKOTA*	$48,864.0	$61,822.0	$63,077.0	$73,391.0	$77,330.0	$98,588.3	$102,404.1	$100,725.5	$114,135.0	$120,472.0	$124,430.0	$110,174.00
OHIO*	$492,608.0	$531,174.0	$604,651.0	$669,197.0	$719,981.0	$701,000.0	$747,750.0	$803,761.0	$964,908.0	$1,109,252.0	$1,208,210.0	$1,259,569.00
OKLAHOMA	$152,262.0	$173,261.0	$196,591.0	$220,827.0	$271,180.0	$325,353.0	$399,886.0	$361,239.9	$367,617.0	$425,877.0	$385,552.0	$386,265.00
OREGON*	$176,653.0	$196,234.0	$204,000.0	$249,536.0	$250,143.0	$252,602.0	$229,302.0	$273,010.0	$282,600.0	$312,194.0	$335,998.0	$349,940.00
PENNSYLVANIA	$659,781.0	$668,467.0	$699,128.0	$730,685.0	$742,051.0	$817,236.0	$870,965.0	$902,253.0	$988,248.0	$1,055,783.0	$1,108,982.0	$1,176,066.00
RHODE ISLAND*	$56,350.0	$62,230.0	$66,341.0	$71,412.0	$78,321.0	$83,187.0	$89,764.6	$96,484.0	$105,500.0	$110,600.0	$117,149.0	$126,185.00
SOUTH CAROLINA	$210,239.0	$227,148.0	$265,876.0	$299,206.0	$344,192.0	$353,530.0	$373,847.0	$393,538.0	$449,794.0	$498,037.0	$520,248.0	$521,016.00
SOUTH DAKOTA	$39,394.0	$42,584.0	$45,509.0	$49,872.0	$51,194.0	$52,143.0	$53,503.0	$53,078.0	$57,707.0	$65,447.0	$73,223.0	$74,041.00
TENNESSEE*	$225,827.0	$266,091.0	$280,469.0	$310,173.0	$338,165.0	$357,016.0	$389,111.0	$371,107.0	$475,868.0	$548,187.0	$608,083.0	$639,237.00
TEXAS	$918,589.0	$1,050,400.0	$1,042,243.0	$1,315,526.0	$1,464,881.0	$1,905,007.0	$2,035,534.0	$2,282,342.0	$2,364,744.0	$2,204,354.0	$2,141,392.0	$2,231,785.00
UTAH	$101,965.0	$110,602.0	$132,847.0	$145,384.0	$160,856.0	$173,370.0	$196,376.0	$199,016.0	$235,799.1	$244,401.0	$257,249.0	$257,389.00
VERMONT*	$20,138.0	$22,983.0	$26,478.0	$27,062.0	$30,459.0	$33,611.0	$36,793.0	$39,598.0	$41,740.0	$44,057.0	$46,778.0	$50,555.00
VIRGINIA*	$316,049.0	$330,586.0	$425,797.0	$444,054.0	$509,731.0	$543,961.0	$590,563.0	$617,233.0	$710,169.0	$770,883.0	$901,452.0	$915,810.00
WASHINGTON*	$310,133.0	$380,250.0	$387,917.0	$458,363.0	$453,685.0	$445,434.5	$445,434.5	$543,817.4	$579,930.6	$588,937.0	$609,937.0	$670,402.00
WEST VIRGINIA*	$124,880.0	$138,063.0	$148,120.0	$158,684.0	$169,819.0	$183,989.0	$182,930.0	$193,565.0	$220,069.0	$233,057.0	$241,087.0	$236,565.00
WISCONSIN	$364,056.0	$399,410.0	$433,482.0	$468,618.0	$511,067.0	$516,112.0	$550,095.0	$595,843.0	$617,958.0	$650,855.0	$666,525.0	$705,430.00
WYOMING	$37,943.0	$42,883.0	$47,043.0	$51,664.0	$70,504.0	$82,644.0	$97,199.0	$101,356.1	$101,830.9	$111,583.0	$111,583.0	$114,180.00
TOTAL	$13,863,013.0	$15,436,540.0	$16,976,341.0	$19,064,205.0	$20,940,149.0	$22,751,669.4	$23,925,657.0	$25,506,206.0	$28,363,648.1	$30,730,135.0	$32,367,127.0	$34,042,040.00

Table 4-1A

STATE APPROPRIATIONS FOR HIGHER EDUCATION, BY STATE AND CENSUS REGIONS, 1976-77 TO 1987-88

STATE	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88
Northeast												
New England												
CONNECTICUT	$145,000.0	$190,757.0	$206,501.0	$212,075.0	$250,357.0	$229,106.0	$252,600.0	$273,706.0	$302,931.0	$329,917.0	$360,640.0	$409,549.00
MAINE	$42,567.0	$45,910.0	$48,966.0	$57,265.0	$62,620.0	$66,071.0	$73,196.0	$76,653.0	$91,160.0	$100,971.0	$125,216.0	$140,645.00
MASSACHUSETTS	$234,292.0	$254,122.0	$273,333.0	$314,929.0	$322,190.0	$361,500.0	$412,413.0	$537,263.0	$641,846.0	$711,102.0	$816,379.0	$895,299.00
NEW HAMPSHIRE	$22,855.0	$27,519.0	$27,542.0	$29,806.0	$32,919.0	$39,323.0	$35,246.0	$41,141.0	$42,630.0	$50,265.0	$55,961.0	$66,901.00
RHODE ISLAND*	$56,350.0	$62,230.0	$66,341.0	$71,412.0	$78,321.0	$83,107.0	$89,764.6	$96,164.0	$105,500.0	$110,808.0	$117,149.0	$126,185.00
VERMONT*	$20,130.0	$22,503.0	$26,470.0	$27,062.0	$30,459.0	$33,611.0	$36,793.0	$39,350.0	$41,740.0	$44,057.0	$46,770.0	$50,535.00
New England Total	$522,094.00	$603,521.00	$649,561.00	$712,549.00	$777,182.00	$813,818.00	$900,021.60	$1,064,845.00	$1,225,807.00	$1,347,120.00	$1,530,131.00	$1,689,134.00
Middle Atlantic												
NEW JERSEY*	$274,405.0	$403,566.0	$370,637.0	$400,366.0	$434,222.0	$464,787.0	$496,314.0	$531,091.0	$753,803.0	$845,326.0	$890,577.0	$1,013,299.00
NEW YORK	$1,251,096.0	$1,298,754.0	$1,421,107.0	$1,543,416.0	$1,664,361.0	$1,835,429.0	$2,010,001.0	$2,273,527.0	$2,414,410.0	$2,545,546.0	$2,720,779.0	$2,936,954.00
PENNSYLVANIA	$659,781.0	$668,467.0	$699,128.0	$738,685.0	$742,851.0	$817,236.0	$870,963.0	$902,253.0	$980,248.0	$1,055,783.0	$1,108,982.0	$1,176,066.00
Middle Atlantic Total	$2,185,282.00	$2,370,787.00	$2,491,172.00	$2,682,467.00	$2,840,634.00	$3,137,452.00	$3,377,280.00	$3,707,871.00	$4,156,541.00	$4,447,655.00	$4,720,338.00	$5,126,319.00
Northeast Total	$2,707,376.00	$2,974,308.00	$3,140,733.00	$3,395,016.00	$3,617,816.00	$3,951,270.00	$4,277,301.60	$4,772,516.00	$5,382,348.00	$5,794,775.00	$6,250,469.00	$6,815,453.00
Annual Percent Change	0.00%	9.86%	5.60%	8.10%	6.56%	9.30%	8.17%	11.58%	12.78%	7.66%	8.00%	9.90%
% Change Over 1976-77	0.00%	9.86%	16.01%	25.40%	33.63%	45.96%	57.99%	76.29%	98.90%	114.04%	131.16%	151.74%
North Central												
East North Central												
ILLINOIS	$697,045.0	$779,201.0	$815,782.0	$876,951.0	$964,584.0	$1,025,211.0	$1,029,282.0	$1,113,182.0	$1,182,857.0	$1,314,353.0	$1,350,614.0	$1,331,564.00
INDIANA*	$316,800.0	$330,152.0	$304,376.0	$411,198.0	$459,639.0	$482,494.0	$536,549.0	$583,484.0	$648,810.0	$687,341.0	$660,532.0	$704,703.00
MICHIGAN	$593,930.0	$660,404.0	$733,978.0	$800,320.0	$816,400.0	$848,332.0	$865,000.0	$905,878.2	$1,000,200.0	$1,152,097.0	$1,220,559.0	$1,313,040.00
OHIO*	$492,600.0	$551,174.0	$604,651.0	$669,197.0	$719,501.0	$781,000.0	$747,730.0	$883,761.0	$964,908.0	$1,109,252.0	$1,200,210.0	$1,259,569.00
WISCONSIN	$364,056.0	$399,410.0	$433,482.0	$468,618.0	$511,067.0	$516,112.0	$550,098.0	$595,043.0	$617,358.0	$650,855.0	$666,525.0	$705,430.00
East North Central Total	$2,464,439.00	$2,720,424.00	$2,972,269.00	$3,234,284.00	$3,471,591.00	$3,573,349.00	$3,728,676.00	$4,082,063.20	$4,322,733.00	$4,893,898.00	$5,154,440.00	$5,314,314.00
West North Central												
IOWA*	$210,345.0	$220,166.0	$272,725.0	$303,631.0	$332,244.0	$341,930.0	$366,958.0	$360,741.0	$352,387.0	$385,378.0	$401,610.0	$441,458.00
KANSAS*	$173,777.0	$180,869.0	$222,216.0	$230,859.0	$259,859.0	$270,662.0	$303,955.0	$306,473.0	$337,267.0	$345,173.0	$350,735.0	$363,924.00
MINNESOTA*	$325,304.0	$401,352.0	$393,359.0	$460,783.0	$477,954.0	$545,383.0	$557,212.0	$610,089.0	$649,604.0	$699,504.0	$747,187.0	$809,963.00
MISSOURI	$236,782.0	$259,359.0	$284,836.0	$312,941.0	$353,252.0	$323,868.0	$358,090.0	$365,931.7	$385,829.0	$476,420.0	$476,420.0	$503,189.00
NEBRASKA	$122,198.0	$131,200.0	$140,339.0	$150,940.0	$166,155.0	$189,189.0	$189,610.0	$195,639.4	$213,337.2	$210,508.0	$217,355.0	$227,203.00
NORTH DAKOTA*	$40,864.0	$41,822.0	$43,077.0	$73,391.0	$77,930.0	$90,588.3	$102,484.1	$100,725.5	$114,435.0	$120,472.0	$124,430.0	$110,174.00
SOUTH DAKOTA	$39,394.0	$42,501.0	$45,309.0	$49,072.0	$51,194.0	$52,143.0	$53,503.0	$53,070.0	$57,707.0	$69,447.0	$73,223.0	$74,041.00
West North Central Total	$1,156,744.00	$1,313,352.00	$1,422,261.00	$1,590,397.00	$1,718,588.00	$1,830,183.30	$1,931,732.10	$2,001,463.60	$2,150,366.20	$2,306,094.00	$2,393,960.00	$2,537,952.00
North Central Total	$3,621,183.00	$4,041,776.00	$4,394,530.00	$4,824,681.00	$5,190,179.00	$5,403,532.30	$5,660,408.10	$6,083,528.80	$6,473,099.20	$7,199,792.00	$7,548,400.00	$7,852,266.00
Annual Percent Change	0.00%	11.61%	8.73%	9.79%	7.58%	4.11%	4.75%	6.06%	7.82%	10.31%	5.71%	4.03%
% Change Over 1976-77	0.00%	11.61%	21.36%	33.23%	43.33%	49.22%	56.31%	65.79%	78.76%	97.20%	108.45%	116.84%

South												
South Atlantic												
DELAWARE	$43,311.0	$44,190.0	$48,031.0	$53,273.0	$63,811.0	$72,125.0	$76,900.0	$77,262.0	$83,453.9	$91,411.0	$96,797.0	$101,339.00
FLORIDA	$434,057.0	$489,609.0	$535,009.0	$610,094.0	$705,409.0	$802,316.0	$905,796.0	$956,250.0	$1,026,658.0	$1,129,209.0	$1,277,704.0	$1,365,759.00
GEORGIA	$263,561.0	$302,797.0	$346,731.0	$385,132.0	$431,963.0	$490,919.0	$534,219.0	$560,077.3	$608,796.7	$670,046.0	$714,604.0	$759,404.00
MARYLAND	$241,866.0	$281,230.0	$292,795.0	$323,732.0	$367,701.0	$385,949.0	$432,653.0	$437,020.0	$487,691.0	$531,986.0	$569,975.0	$614,657.00
NORTH CAROLINA	$407,977.0	$466,208.0	$521,663.0	$580,189.0	$660,645.0	$750,464.0	$793,133.0	$800,022.3	$1,004,122.0	$1,078,022.0	$1,172,120.0	$1,284,076.00
SOUTH CAROLINA	$210,239.0	$227,148.0	$265,076.0	$299,206.0	$344,492.0	$353,530.0	$373,047.0	$393,530.0	$449,794.0	$490,037.0	$520,240.0	$521,816.00
VIRGINIA	$316,019.0	$330,386.0	$425,797.0	$441,854.0	$509,731.0	$543,961.0	$590,363.0	$617,233.0	$710,169.0	$770,883.0	$901,452.0	$915,818.00
WEST VIRGINIA	$124,900.0	$130,863.0	$140,120.0	$150,604.0	$169,819.0	$183,989.0	$182,930.0	$193,965.0	$220,869.0	$233,057.0	$241,887.0	$236,365.00
South Atlantic Total	$2,047,749.00	$2,279,031.00	$2,584,982.00	$2,854,364.00	$3,253,571.00	$3,599,288.00	$3,898,341.00	$4,122,983.60	$4,590,750.60	$5,003,481.00	$5,493,587.00	$5,798,634.00
East South Central												
ALABAMA	$250,154.0	$310,974.0	$374,332.0	$377,135.0	$427,499.0	$417,737.0	$407,082.0	$404,553.0	$502,134.0	$631,341.0	$556,894.0	$570,537.00
KENTUCKY	$205,861.0	$205,861.0	$272,909.0	$299,918.0	$307,572.0	$339,600.0	$363,613.0	$400,477.0	$407,904.0	$432,827.0	$450,960.0	$499,526.00
MISSISSIPPI	$154,036.0	$186,668.0	$218,950.0	$233,730.0	$261,262.0	$284,322.0	$296,381.0	$333,720.6	$342,506.0	$373,687.0	$327,353.0	$362,036.00
TENNESSEE	$225,827.0	$266,091.0	$280,469.0	$318,173.0	$330,165.0	$357,816.0	$389,111.0	$371,487.0	$475,860.0	$548,187.0	$600,083.0	$639,237.00
East South Central Total	$836,178.00	$969,594.00	$1,146,660.00	$1,228,964.00	$1,334,498.00	$1,398,695.00	$1,456,197.00	$1,510,197.60	$1,728,612.00	$1,986,042.00	$1,951,290.00	$2,071,336.00
West South Central												
ARKANSAS	$114,936.0	$126,155.0	$140,319.0	$169,644.0	$187,567.0	$183,980.0	$185,680.0	$197,321.0	$241,730.0	$275,224.0	$273,182.0	$279,105.00
LOUISIANA	$215,457.0	$242,469.0	$278,954.0	$330,000.0	$390,325.0	$454,754.0	$501,902.0	$494,243.7	$553,180.0	$541,680.0	$541,722.0	$514,517.00
OKLAHOMA	$152,262.0	$173,261.0	$196,594.0	$220,027.0	$271,180.0	$325,553.0	$399,806.0	$361,239.9	$367,617.0	$425,077.0	$385,552.0	$386,265.00
TEXAS	$918,589.0	$1,050,400.0	$1,042,243.0	$1,315,526.0	$1,464,881.0	$1,905,887.0	$2,035,534.0	$2,282,342.0	$2,361,744.0	$2,209,354.0	$2,141,392.0	$2,231,785.00
West South Central Total	$1,401,244.00	$1,592,285.00	$1,658,110.00	$2,044,825.00	$2,321,953.00	$2,869,894.00	$3,122,840.00	$3,335,146.60	$3,527,279.00	$3,471,143.00	$3,341,848.00	$3,411,672.00
South Total	$4,285,162.00	$4,841,710.00	$5,389,752.00	$6,127,353.00	$6,910,022.00	$7,867,877.00	$8,477,378.00	$8,968,287.00	$9,846,641.60	$10,460,636.00	$10,786,533.00	$11,281,642.00
Annual Percent Change	0.00%	12.95%	11.32%	13.69%	12.77%	13.88%	7.65%	5.85%	9.80%	6.23%	3.12%	4.59%
% Change Over 1976-77	0.00%	12.95%	25.78%	42.99%	61.25%	83.59%	97.64%	109.29%	129.79%	144.11%	151.72%	163.27%
West												
Mountain												
ARIZONA	$184,786.0	$207,961.0	$218,166.0	$232,787.0	$280,446.0	$291,461.0	$298,819.3	$330,182.0	$378,214.0	$432,342.0	$480,076.0	$491,911.00
COLORADO	$206,226.0	$220,909.0	$237,310.0	$245,864.0	$263,984.0	$305,791.0	$322,836.3	$364,747.0	$380,382.0	$399,140.0	$423,132.0	$441,021.00
IDAHO	$69,197.0	$77,072.0	$83,797.0	$83,608.0	$94,148.0	$92,131.6	$104,819.0	$101,062.0	$110,123.0	$119,042.0	$126,030.0	$139,136.00
MONTANA	$47,705.0	$52,251.0	$55,050.0	$60,494.0	$66,903.0	$83,693.0	$98,273.0	$103,617.0	$107,362.0	$106,150.0	$103,167.0	$105,106.00
NEVADA	$42,355.0	$45,457.0	$50,112.0	$56,896.0	$62,107.0	$65,091.0	$71,529.0	$78,360.0	$78,097.0	$94,400.0	$102,419.0	$112,730.00
NEW MEXICO	$82,847.0	$95,756.0	$114,458.0	$123,731.0	$143,316.0	$171,876.0	$184,884.0	$195,494.0	$220,055.0	$234,095.0	$233,552.0	$242,798.00
UTAH	$101,905.0	$118,682.0	$132,047.0	$145,384.0	$160,656.0	$173,578.0	$196,376.0	$199,816.0	$235,799.1	$244,401.0	$257,249.0	$257,389.00
WYOMING	$37,943.0	$42,803.0	$47,043.0	$51,644.0	$70,504.0	$82,644.0	$97,199.0	$101,396.1	$101,630.9	$111,583.0	$111,583.0	$114,188.00
Mountain Total	$772,244.00	$860,891.00	$937,983.00	$1,003,398.00	$1,141,662.00	$1,266,717.60	$1,364,529.60	$1,480,644.10	$1,613,391.00	$1,741,153.00	$1,837,208.00	$1,904,279.00
Pacific												
ALASKA	$64,629.0	$60,212.0	$74,352.0	$72,452.0	$81,884.0	$122,439.0	$140,531.4	$157,042.7	$169,031.0	$235,756.0	$207,086.0	$157,156.00
CALIFORNIA	$1,827,549.0	$1,961,525.0	$2,333,110.0	$2,811,321.0	$3,150,085.0	$3,284,675.0	$3,145,696.0	$3,125,600.0	$3,820,097.9	$4,247,256.0	$4,562,651.0	$4,748,150.00
HAWAII	$97,884.0	$109,642.0	$113,767.0	$119,073.0	$135,373.0	$154,755.0	$183,114.0	$181,560.0	$186,700.0	$200,636.0	$220,845.0	$254,672.00
OREGON	$176,653.0	$190,234.0	$204,000.0	$249,556.0	$250,443.0	$252,602.0	$229,302.0	$273,010.0	$282,600.0	$312,194.0	$335,930.0	$349,940.00
WASHINGTON	$310,133.0	$360,250.0	$387,917.0	$458,363.0	$483,685.0	$448,434.5	$448,434.5	$543,817.4	$579,930.6	$588,937.0	$609,937.0	$678,482.00
Pacific Total	$2,477,048.00	$2,717,863.00	$3,113,146.00	$3,719,805.00	$4,080,270.00	$4,259,905.50	$4,154,077.90	$4,281,030.10	$5,047,967.50	$5,592,779.00	$5,936,517.00	$6,188,400.00
West Total	$3,249,292.00	$3,578,754.00	$4,051,329.00	$4,717,155.00	$5,222,132.00	$5,526,623.10	$5,518,607.50	$5,761,674.20	$6,661,359.30	$7,333,932.00	$7,773,725.00	$8,092,687.00
Annual Percent Change	0.00%	10.14%	13.21%	16.43%	10.71%	5.83%	-0.15%	4.41%	15.61%	10.10%	6.00%	4.10%
% Change Over 1976-77	0.00%	10.14%	24.68%	45.17%	60.72%	70.09%	69.84%	77.33%	105.01%	125.71%	139.24%	149.06%
TOTAL	$13,863,013.0	$15,436,340.0	$16,976,344.0	$19,064,205.0	$20,940,149.0	$22,751,669.4	$23,925,657.0	$25,506,206.0	$28,363,640.1	$30,730,135.0	$32,367,127.0	$34,042,049.0
Annual Percent Change	0.00%	11.35%	9.98%	12.30%	9.84%	8.65%	5.16%	6.61%	11.20%	8.34%	5.33%	5.17%
% Change Over 1976-77	0.00%	11.35%	22.46%	37.52%	51.05%	64.12%	72.59%	83.95%	104.60%	121.67%	133.48%	145.56%

APPENDIX 5

Table 5-1

PER CAPITA DISPOSABLE INCOME, BY STATE AND CENSUS REGIONS, 1969 TO 1986

State & Regions	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
1 United States	3234	3484	3732	3989	4466	4845	5283	5740	6250	6963	7679	8424	9240	9721	10350	11250	11876	12521
2 New England	3525	3801	4040	4266	4691	5100	5523	5981	6504	7189	7982	8936	9842	10618	11505	12744	13506	14575
3 Connecticut	3976	4291	4522	4767	5280	5759	6214	6694	7362	8134	9093	10196	11262	12073	13135	14534	15305	16672
4 Maine	2742	3016	3209	3423	3800	4179	4440	5009	5487	5984	6488	7224	7831	8221	8891	9801	10366	11106
5 Massachusetts	3548	3836	4103	4329	4737	5145	5593	6011	6587	7210	7985	8926	9823	10718	11587	12913	13769	14836
6 New Hampshire	3251	3560	3586	3803	4258	4588	4944	5480	6005	6708	7563	8524	9415	10154	11044	12236	12971	13891
7 Rhode Island	3291	3533	3694	3929	4294	4610	5091	5525	6022	6532	7171	8129	8978	9676	10490	11434	11966	12834
8 Vermont	2960	3075	3349	3530	3906	4214	4522	5029	5366	6118	6756	7411	8256	8777	9230	9907	10603	11354
9 Mideast	3605	3904	4187	4438	4870	5295	5773	6220	6708	7372	8089	8982	9854	10502	11333	12327	13075	13949
10 Delaware	3510	3728	3976	4265	4719	5111	5471	5862	6324	6871	7439	8251	8856	9364	10326	11045	11734	12745
11 D.C.	3812	4475	5008	5420	5807	6410	7094	7594	8253	8831	9420	10248	11231	11858	12840	14122	15202	15955
12 Maryland	3389	3718	4002	4250	4736	5137	5599	6128	6552	7260	7974	8760	9804	10485	11412	12487	13402	14091
13 New Jersey	3846	4154	4467	4732	5216	5654	6145	6646	7172	7943	8738	9629	10676	11700	12744	13918	14791	15927
14 New York	3784	4095	4398	4648	5044	5455	5927	6309	6778	7490	8050	8963	9844	10492	11410	12493	13172	14070
15 Pennsylvania	3245	3490	3710	3944	4307	4626	5006	5806	6314	6960	7683	8462	9226	9748	10278	10990	11674	12403
16 Great Lakes	3372	3538	3818	4082	4614	4990	5398	5926	6520	7206	7918	8696	9220	9624	10190	11167	11776	12468
17 Illinois	3658	3865	4170	4435	5025	5470	5981	6457	7048	7777	8514	9184	10073	10577	11111	12120	12741	13518
18 Indiana	3116	3224	3502	3748	4362	4560	4981	5526	6078	6731	7368	7877	8543	8789	9239	10241	10682	11291
19 Michigan	3397	3512	3821	4135	4664	5002	5356	5950	6638	7316	8010	8623	9196	9430	10092	11119	11879	12598
20 Ohio	3299	3473	3713	3954	4421	4837	5180	5708	6280	6920	7589	8276	8917	9326	9889	10841	11404	12015
21 Wisconsin	3072	3294	3552	3795	4244	4634	5037	5522	6133	6883	7649	8316	8822	9336	9920	10761	11348	12055
22 Plains	3033	3279	3530	3821	4345	4705	5181	5986	6673	6847	7582	8075	8930	9314	9773	10784	11366	12163
23 Iowa	3095	3297	3419	3769	4452	4682	5224	5977	6182	7079	7594	8013	9067	9112	9275	10331	10807	11540
24 Kansas	3016	3252	3579	3957	4541	4832	5276	5739	6235	7083	7987	8307	9346	9896	10340	11233	11771	12500
25 Minnesota	3172	3441	3652	3873	4425	4855	5197	5593	6290	6930	7580	8410	9184	9558	10072	11302	11893	13117
26 Missouri	2996	3279	3532	3761	4261	4515	4936	5390	5985	6650	7369	7952	8763	9094	9779	10649	11324	11933
27 Nebraska	3049	3259	3594	3861	4550	4832	5302	5831	6946	6898	7839	7871	9118	9244	9665	10763	11429	12051
28 North Dakota	2627	2764	3204	3822	5599	5222	5301	5220	5998	6731	7382	7339	8493	9102	9400	10317	10583	11100
29 South Dakota	2634	2885	3167	3624	4455	4523	4980	4820	5887	6389	7278	7323	8253	8388	8640	9505	10032	10730
30 Southeast	2622	2860	3085	3348	3776	4122	4486	4894	5342	5969	6586	7264	8010	8417	9006	9796	10313	10878
31 Alabama	2348	2577	2774	3028	3388	3706	4038	4524	4935	5494	6083	6574	7182	7540	8004	8736	9162	9591
32 Arkansas	2273	2487	2720	2979	3458	3600	4019	4446	4935	5587	6068	6483	7224	7394	7936	8599	9200	9857
33 Florida	3089	3421	3675	3954	4458	4788	5143	5491	6020	6794	7530	8385	9263	9586	10497	11254	11894	12576
34 Georgia	2680	2914	3148	3422	3845	4160	4503	4901	5303	5912	6437	7098	7847	8348	8930	9930	10568	11122
35 Kentucky	2511	2726	2923	3154	3577	3910	4271	4789	5176	5741	6367	6998	7627	7937	8200	8904	9271	9933
36 Louisiana	2514	2721	2909	3113	3496	3906	4333	4787	5262	5910	6563	7406	8292	8755	9064	9559	9809	9827
37 Mississippi	2101	2290	2504	2762	3144	3405	3686	4100	4556	4988	5560	5954	6504	6888	7174	7705	8044	8395
38 North Carolina	2576	2802	3000	3278	3718	4013	4352	4758	5137	5719	6231	6818	7539	7971	8606	9517	9915	10543
39 South Carolina	2421	2644	2822	3031	3426	3787	4103	4470	4839	5365	5898	6503	7123	7456	8011	8812	9230	9685
40 Tennessee	2545	2751	2983	3278	3703	4030	4348	4790	5212	5844	6451	6988	7644	7988	8464	9339	9830	10395
41 Virginia	2971	3168	3432	3702	4156	4548	5014	5471	5939	6606	7353	8207	9111	9764	10538	11492	12271	12993
42 West Virginia	2373	2679	2916	3164	3479	3819	4277	4673	5120	5646	6207	6773	7201	7694	7837	8355	8810	9479
43 Southwest	2948	3118	3335	3580	4026	4405	4898	5351	5850	6622	7366	8129	9057	9556	9956	10683	11235	11264
44 Arizona	2957	3272	3554	3821	4252	4570	4814	5200	5634	6405	7101	7933	8615	8802	9525	10465	11137	11767
45 New Mexico	2504	2737	2994	3252	3592	3941	4420	4771	5271	5894	6520	7143	7779	8144	8615	8962	9716	9890
46 Oklahoma	2726	2992	3213	3430	3920	4243	4739	5137	5612	6268	7141	7941	8860	9321	9486	9957	9893	9837
47 Texas	2891	3157	3358	3603	4058	4454	4933	5479	5996	6807	7527	8296	9298	9873	10255	11027	11659	11569

48 Rocky Mountain	2905	3212	3474	3776	4237	4640	5032	5452	5921	6703	7374	8152	8945	9317	9846	10503	10908	11247
49 Colorado	3111	3456	3769	4014	4481	4907	5361	5833	6342	7143	7973	8943	9951	10575	11302	12153	12540	12765
50 Idaho	2802	3063	3250	3594	4094	4614	4803	5269	5626	6312	6806	7452	7971	8008	8754	9157	9541	9673
51 Montana	2755	3083	3252	3699	4293	4551	4934	5199	5539	6510	7002	7693	8519	8749	8060	9347	9606	10416
52 Utah	2615	2876	3121	3380	3688	4027	4405	4803	5259	5869	6395	6875	7410	7685	8184	8751	9172	9665
53 Wyoming	3005	3254	3574	3985	4533	5029	5520	5884	6627	7702	8480	9421	10143	10132	9746	10269	10825	10675
54 Far West	3730	4005	4225	4487	4957	5453	5972	6513	7083	7945	8808	9652	10540	10997	11608	12621	13322	14045
55 California	3839	4131	4354	4613	5080	5585	6107	6647	7229	8095	8991	9876	10837	11331	12010	12999	13737	14553
56 Nevada	3690	4100	4425	4658	5140	5629	5995	6476	7167	8103	8873	9714	10515	10643	11296	11780	12447	13071
57 Oregon	3069	3328	3579	3888	4338	4777	5223	5705	6245	6984	7689	8301	8807	8924	9626	10413	10849	10726
58 Washington	3501	3696	3940	4092	4586	5107	5643	6186	6746	7637	8453	9216	9937	10430	11149	11919	12531	13194
59 Alaska	3909	4336	4551	4711	5532	6419	8468	9639	9847	10044	10257	11568	12670	14988	15265	15433	15961	15453
60 Hawaii	3698	4182	4394	4628	4993	5645	6141	6488	6784	7427	8116	9064	9609	10242	10866	11488	12196	12893
CENSUS REGIONS																		
61 New England	3525	3801	4040	4266	4691	5188	5523	5981	6584	7189	7982	8936	9842	10618	11585	12741	13586	14575
62 Middle Atlantic	3625	3915	4194	4441	4869	5294	5772	6218	6783	7366	8089	8975	9852	10495	11315	12388	13024	13918
Northeast	3575	3858	4117	4353.5	4780	5197	5647.5	6095.5	6683.5	7277.5	8035.5	8955.5	9847	10556.5	11418	12522	13265	14246.5
63 East North Central	3372	3538	3818	4082	4614	4998	5398	5926	6528	7286	7918	8546	9228	9624	10198	11167	11776	12468
64 West North Central	3033	3279	3538	3821	4345	4788	5151	5486	6073	6847	7582	8075	8938	9314	9773	10784	11366	12163
North Central	3203	3409	3674	3952	4480	4918	5275	5706	6301	7027	7750	8311	9109	9469	9982	10976	11571	12316
65 South Atlantic	2891	3166	3413	3682	4127	4483	4878	5278	5724	6378	7012	7782	8565	9037	9779	10653	11287	11939
66 East South Central	2906	2618	2829	3090	3498	3807	4147	4582	5016	5577	6178	6698	7321	7667	8053	8809	9206	9722
67 West South Central	2736	2986	3191	3427	3867	4261	4749	5207	5709	6458	7164	7919	8671	9383	9744	10424	10908	10913
South	2878	2923	3144	3400	3828	4184	4589	5022	5483	6137	6782	7464	8252	8696	9192	9962	10467	10858
68 Mountain	2912	3224	3498	3777	4220	4598	4969	5378	5859	6638	7333	8094	8846	9157	9734	10412	10943	11360
69 Pacific	3732	4010	4230	4498	4961	5472	6009	6554	7189	7951	8804	9657	10540	11031	11725	12651	13351	14058
West	3322	3617	3860	4133.5	4590.5	5031	5489	5966	6484	7294.5	8068.5	8875.5	9693	10094	10729.5	11531.5	12147	12709

APPENDIX 6

PUBLIC COLLEGES AND UNIVERSITIES INCLUDED IN THE WASHINGTON COORDINATING BOARD SURVEY OF TUITION AND REQUIRED FEES

STATE	UNIVERSITY	COLLEGES & STATE UNIVERSITIES	COMMUNITY COLLEGES
Alabama	Univ of Alabama, Tuscaloosa	Alabama State Univ Univ of North Alabama Livingston University Univ of Montevallo Univ of South Alabama	Estimated Average of Community Colleges
Alaska	Univ of Alaska, Fairbanks	None	Estimated Average of Community Colleges
Arizona	Univ of Arizona	North Arizona Univ Arizona State Univ	Estimated Average of Community Colleges
Arkansas	Univ of Arkansas, Fayetteville	Arkansas Tech Univ Univ of Central Arkansas Univ of Arkansas, Monticello Arkansas State Univ	Estimated Average of Community Colleges
California	Univ of Calif, Berkeley	Calif Poly State Univ (San Luis Obispo) Calif State College, San Bernardino Sonoma State Univ Calif State Univ, Chico Calif State Univ, Fresno Calif State Univ, Fullerton Calif State Univ, Northridge Calif State Univ, Long Beach Calif State Univ, Los Angeles Calif State Univ, Sacramento Humboldt State Univ	Estimated Average of Community Colleges

STATE	UNIVERSITY	COLLEGES & STATE UNIVERSITIES	COMMUNITY COLLEGES
Colorado	Univ of Colorado, Boulder	Adams State College Fort Lewis State Coll Metropolitan State College Univ of No Colorado Western State College of Colorado	Estimated Average of Community Colleges
Connecticut	Univ of Connecticut, Storrs	Central Connecticut State University Southern Connecticut State University Western Connecticut State University	Estimated Average of Community Colleges
Delaware	Univ of Delaware	None	Estimated Average of Community Colleges
Florida	State Univ System Univ of Florida, Gainesville Fl Atlantic Univ Fl International University Univ of North Fl Univ of South Fl Univ of West Fl	None	Estimated Average of Community Colleges
Georgia	Univ of Georgia	Albany State College Armstrong State College Augusta College Columbus College Georgia College Georgia So College Valdosta State College West Georgia College	Estimated Average of Community Colleges
Hawaii	Univ of Hawaii, Manoa	None	Estimated Average of Community Colleges

STATE	UNIVERSITY	COLLEGES & STATE UNIVERSITIES	COMMUNITY COLLEGES
Idaho	Univ of Idaho	Idaho State University Boise State University	Estimated Average of Community Colleges
Illinois	Univ of Illinois, Urbana	Eastern Illinois Univ Illinois State Univ No Illinois University Northeastern Illinois University Western Illinois Univ	Estimated Average of Community Colleges
Indiana	Indiana University, Bloomington	Ball State University Indiana State University	Estimated Average of Community Colleges
Iowa	University of Iowa	Univ of Northern Iowa	Estimated Average of Community Colleges
Kansas	University of Kansas, Lawrence	Fort Hays State Univ Pittsburg State Univ Emporia State Univ Wichita State Univ	Estimated Average of Community Colleges
Kentucky	Univ of Kentucky, Lexington	Eastern Kentucky Univ Morehead State Univ Murray State Univ No Kentucky University Western Kentucky Univ Univ of Louisville Kentucky State Univ	Estimated Average of Community Colleges
Louisiana	Louisiana State Univ, Baton Rouge	Louisiana Tech Univ McNeese State Univ Nicholls State Univ Northeast Louisiana Univ Northwestern State Univ Southeastern Louisiana Univ Grambling State Univ	Estimated Average of Community Colleges

STATE	UNIVERSITY	COLLEGES & STATE UNIVERSITIES	COMMUNITY COLLEGES
Maine	Univ of Maine, Orono	Univ of Maine, Machias Univ of Maine, Fort Kent Univ of Maine, Presque Isle	Estimated Average of Community Colleges
Maryland	Univ of Maryland, College Park	Bowie State College Coppin State College Morgan State University St. Mary's College of Maryland Towson State University Frostburg State College	Estimated Average of Community Colleges
Massachusetts	Univ of Massachusetts, Amherst	Fitchburg State College Framingham State College Mass College of Art North Adams State Coll Southeastern Massachusetts University Worcester State College Salem State College	Estimated Average of Community Colleges
Michigan	Univ of Michigan, Ann Arbor	Central Michigan Univ Eastern Michigan Univ Grand Valley State Coll Northern Michigan Univ Oakland University Western Michigan Univ	Estimated Average of Community Colleges
Minnesota	Univ of Minnesota-Twin Cities	State Univ System (Bemidji, Mankato, Moorhead, St. Cloud, Southwest Minnesota, Winona)	Estimated Average of Community Colleges
Mississippi	Univ of Mississippi, Oxford	Alcorn State University Jackson State Univ Mississippi Univ for Women Univ of So Mississippi Mississippi Valley State University	Estimated Average of Community Colleges

STATE	UNIVERSITY	COLLEGES & STATE UNIVERSITIES	COMMUNITY COLLEGES
Missouri	University of Missouri, Columbia	Central Missouri State University Missouri So State Coll Missouri Western Coll Northeast Missouri State University Southwest Missouri State College	Estimated Average of Community Colleges
Montana	University of Montana	Eastern Montana College Western Montana College	Estimated Average of Community Colleges
Nebraska	Univ of Nebraska, Lincoln	Kearney State College Wayne State College	Estimated Average of Community Colleges
Nevada	Univ of Nevada, Reno	Univ of Nevada, Las Vegas	Estimated Average of Community Colleges
New Hampshire	Univ of New Hampshire, Durham	Keene State College Plymouth State College	Estimated Average of Community Colleges
New Jersey	Rutgers, New Brunswick	Glassboro State College Jersey City State College Montclair State College NJ Institute of Tech Ramapo College of NJ Stockton State College Trenton State College	Estimated Average of Community Colleges
New Mexico	Univ of New Mexico, Albuquerque	Western New Mexico Univ	Estimated Average of Community Colleges

STATE	UNIVERSITY	COLLEGES & STATE UNIVERSITIES	COMMUNITY COLLEGES
New York	State Univ of New York, Buffalo	Empire State College SUC - Brockport SUC - Buffalo SUC - Fredonia SUC - Geneseo SUC - Old Westbury SUC - New Paltz SUC - Oswego SUC - Plattsburg SUC - Potsdam	Estimated Average of Community Colleges
North Carolina	Univ of North Carolina, Chapel Hill	Appalachian State Univ East Carolina Univ North Carolina Central University Western Carolina Univ Winston Salem State Univ	Estimated Average of Community Colleges
North Dakota	Univ of North Dakota, Grand Forks	Dickinson State College Mayville State College Minot State College Valley City State College	Estimated Average of Community Colleges
Ohio	Ohio State University, Columbus	Bowling Green State Univ University of Akron University of Toledo Wright State University	Estimated Average of Community Colleges
Oklahoma	Univ of Oklahoma, Norman	Central State University East Central Oklahoma State University Northeastern Oklahoma State University Northwestern Oklahoma State University Southeastern Oklahoma State University Southwestern Oklahoma State University	Estimated Average of Community Colleges

STATE	UNIVERSITY	COLLEGES & STATE UNIVERSITIES	COMMUNITY COLLEGES
Oregon	Univ of Oregon, Eugene	Eastern Oregon College Southern Oregon College Portland State University Oregon Institute of Tech	Estimated Average of Community Colleges
Pennsylvania	Pennsylvania State Univ, Univ Park	Bloomsburg Univ of PA California Univ of PA Cheyney Univ of PA Clarion Univ of PA East Stroudsburg Univ of PA Edinboro Univ of PA Indiana Univ of PA Kutztown Univ of PA Lock Haven Univ of PA Millersville Univ of PA Slippery Rock Univ of PA	Estimated Average of Community Colleges
Rhode Island	Univ of Rhode Island	Rhode Island College	Estimated Average of Community Colleges
South Carolina	Univ of South Carolinaa	Francis Marion College	Estimated Average of Community Colleges
South Dakota	Univ of South Dakota, Vermillion	Black Hills State College Dakota State College	Estimated Average of Community Colleges
Tennessee	Univ of Tennessee, Knoxville	Austin Peay State Univ East Tennessee State Univ Memphis State Univ Middle Tennessee State Univ Univ of Tennessee, Chattanooga Univ of Tennessee, Martin	Estimated Average of Community Colleges

STATE	UNIVERSITY	COLLEGES & STATE UNIVERSITIES	COMMUNITY COLLEGES
Texas	Univ of Texas, Austin	Angelo State University East Texas State Univ Midwestern State Univ North Texas State Univ Sam Houston State Univ Southwest Texas State Univ Stephen F. Austin State Univ Texas A & I, Kingsville West Texas State Univ	Estimated Average of Community Colleges
Utah	University of Utah	Weber State College	Estimated Average of Community Colleges
Vermont	University of Vermont	Castleton State College Lyndon State College	Estimated Average of Community Colleges
Virginia	Univ of Virginia, Charlottesville	George Mason University Longwood College James Madison University Old Dominion University Radford College	Estimated Average of Community Colleges
West Virginia	West Virginia Univ, Morgantown	Bluefield State College Concord College Fairmont State College Marshall University Shepherd College West Liberty State College West Virginia Institute of Technology	Estimated Average of Community Colleges
Wisconsin	Univ of Wisconsin, Madison	Univ of Wisconsin, Eau Claire Univ of Wisconsin, Oshkosh Univ of Wisconsin, River Falls Univ of Wisconsin, Stevens Point	Estimated Average of Community Colleges

STATE	UNIVERSITY	COLLEGES & STATE UNIVERSITIES	COMMUNITY COLLEGES
Wyoming	Univ of Wyoming	None	Estimated Average of Community Colleges